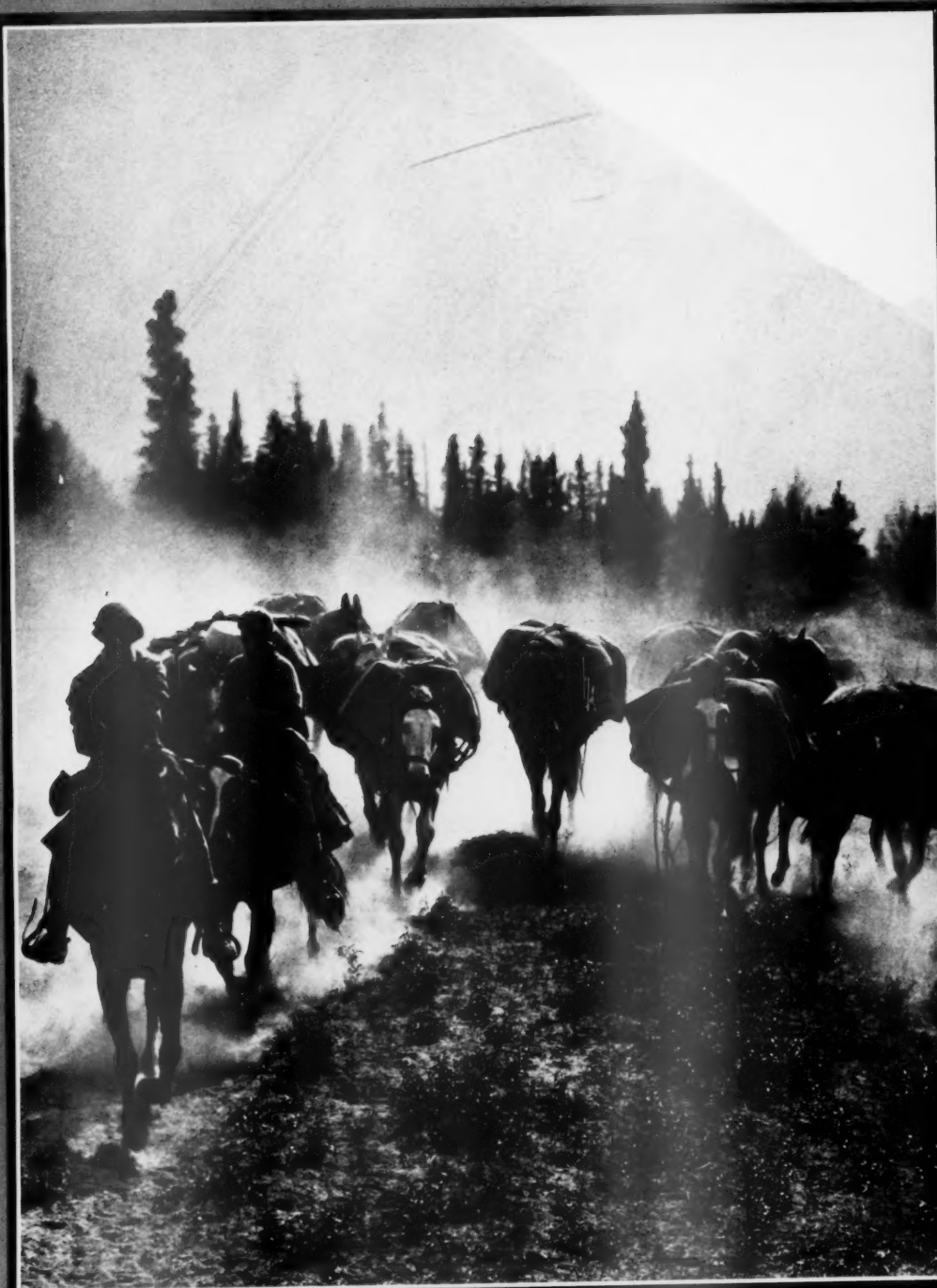


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OID BUTLER, Editor

L. M. CROMELIN and ERLE KAUFFMAN, Assistant Editors

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WE CAME TO THE MAGNIFICENT WATERFALL WHERE
THE MIGHTY ENGLISH POURS HER ENTIRE CRYSTAL
FLOW INTO A CANYON OF SOLID ROCK. "O, GLORIOUS
ENGLISH," I SAID TO MYSELF,—HERE INDEED WAS A
RIVER AFTER A MAN'S HEART — A RIVER WHOSE
BEAUTY WAS RIVALED ONLY BY THE MYSTERY
OF ITS DEPTHS.

THE ENGLISH RIVER COUNTRY BY CANOE

A MONTH ON THE QUEEN OF
CANADA'S NORTHERN WATERWAYS

By CALVIN RUTSTRUM

THERE had been warning from timid souls that a canoe journey north of latitude fifty-one in late summer was made only by "one way" travelers—they go in but they do not come out. We shed these remarks with an oily attitude until we stepped upon the observation platform of our carrier and found a snow and sleet storm in progress. Such inclemency of weather caused us to question the merits of our hardiness. The timid souls waved away yesterday were spirited back into our consciousness as sages of the sea-

sons. Further, the comfort of the steam-heated Pullman was not long to offer security for we were soon to be precipitated, bag and pack, into the whirling maelstrom of this northern night.

The kind consideration of men of the North, however, had not ceased to work its formula. We had arranged by mail the reservation of a canoe, planning to make the wilderness journey without guides. Naturally we anticipated no hospitality at rails-end. But as we were swept around a



Along such palisaded shores we moved until noon, when we sighted a camp spot on the left shore and our canoe just naturally gravitated toward it.

sharp granite curve to what proved to be a typical frontier town of the North, a tiny rail station, we were surprised to hear our names called from out of the darkness. It was Holst, who was to supply our canoe, and we were soon held in the buoyancy of his warm and unexpected reception. Two Indians in moccasined feet silently shouldered our packs and removed them to the log building where our host had attended our lodging. Long into the night we smoked our pipes before an open fire, absorbing a wealth of knowledge of the country to the north. The following day we moved north on the Winnipeg River. The only guide to our course was a compass and a sheet of paper, on which was drawn the English and Sturgeon Rivers. The thought prevailing in our minds was:

"Can we reach the English River and search out its ultimate reaches before the snow flies and the waters imprison us in their icy tentacles?" Overhead, snow clouds scudded across the sky; but they seemed enroute elsewhere, for the sun began to break through with cheering glances. Jim shed his mackinaw. In less than a half hour I was compelled to follow suit. By ten o'clock the omens of winter had passed and we were absorbing the mellow sweetness of late summer.

By noon we had established a methodical rhythm of the paddle. Now and then a quick glance at the compass corrected the nose of our canoe, for the Winnipeg River in the Pointe Du Boi country is really not a river at all. It is a series of lakes flecked with islands. Near the ends of the lakes the current speeds up and you are reminded that these waters are enroute to Hudson Bay. And if you are not on your guard you may be racing with the speed of a passenger train toward a roaring waterfall. Our eyes were strained eagerly for this waterfall, but no sooner had the current speeded up when we again felt the calm of slow moving water. The course widened into a small lake, the beauty of which lent a rare charm to the country. Every esthetic faculty responded at

once. All physical reflexes stopped. The paddles became limp and trailed in the water, and we floated quietly and calmly, allowing the mystery and beauty to play on our senses. Perhaps a more natural pause in the day's occupation has never stilled the hands of labor. We sighted a camp spot on the left shore and the canoe automatically gravitated toward it. This was indeed a spot to lure man at the close of day.

The bed rock of clean granite formed a gradual slope to the water, losing itself in the soil above and in the water below. A gentle slope shaded by pines, snug and inviting, begged for our tent.

The first cooking fire of a wilderness journey is more than the act of preparing a meal. It is a benediction, a ceremony, a tribute

to the Red Gods. Jim had

agreed to make the first genuflection before the altar of flame. But

judging by the dexterity with which he disengaged cooking pails, erected waugan sticks, and stirred the bannock dough, he had but one thought in mind, to satisfy the cravings of two hungry travelers. I was in direct sympathy with his neglect of ceremony. My sensual being was crying out for food with shouts loud enough to drown any voice of the spirit. Yet Naniboujou was tolerant with us. The earth did not open up and swallow us. Supper progressed with a certainty; and the tent, the silken sides of which I had taken to stretch, was already bearing the semblance of a wilderness home. Then I caught a few elusive moments before supper. I found a rocky promontory above the camp where I squatted apprehensively as a statue of

Buddha. This was truly the time of day for reflection. The wind was stirring overhead and shimmered the water in undulating dips, while the pines at my back breathed soft words in cognizance of my presence. The sun was by now just topping the spruce spires across the lake and introducing the first golds and crimsons of a true northern sunset. At such times as these we are prompted by some involuntary stimulus to take stock



The sun was topping the spruce trees across the lake, introducing the first golds and crimsons of a true northern sunset, as we made camp.

of life. Nature seems to demand an accounting. This majesty of beauty and serenity that swept from my feet to infinity conveyed the futility of our conventional struggles. I tried to reduce to common terms—tried to grasp tangibly the meaning of life—that I might contrast the human struggle with the peace of mind experienced here. I gave up. It is not that easy. The universal puzzle cannot be capped under a halfshell. Yet I concluded that the beginning of a wise philosophy of simple living had started to germinate in the recesses of my brain.

and feathers. A silkline lean-to tent of special design, convertible for cold weather, was used. All breadstuffs were baked in a reflector oven so that we might reduce this fare to its simplest form—flour and cereals. We tempered the grub list as much as we dared with dehydrated foods. In emergency we had planned to lean with some weight on the Winchester carbine. Poirer packs housed the outfit.

There had been a conceited pride in this equipment up to this time, when a short episode of woods life was enacted to dampen this pride considerably. We had just completed



At Separation Lake we reluctantly prepared to leave the waters of the English, viewing for the last time the coming and the going of the waters—out of the wilderness, through the wilderness and into the wilderness, finally to mix with the waters of Hudson Bay.

I suddenly recovered from my reverie when Jim's voice sounded from the vicinity of the tent. "Take it away," he cried. There was no mistaking this phrase. I had heard it shouted by my companion from deep gorge and mountain top and it re-echoed down the years the reverberations of fine camp food.

Something must be said of our equipment. No tale of the woods would be complete without some reference to it. In view of traveling in the most expedient manner possible and not doubling back over the portages, a special effort was made at lightness of equipment. Blankets were sacrificed in lieu of specially made sleeping bags of Australian wool

our repast of the evening, and were languishing in the beauty of the northern sunset, when a canoe with a lone traveler was seen moving toward us from across the crimson water. We readily detected the short body stroke peculiar to the Indian. Then abruptly the paddling ceased, and we saw our Indian engaged in the capture of a fish, after which the paddling was resumed. A hundred feet from our shore this lone habitant of the North glided past and there was the usual "*bojou, bojou*" greeting. Five hundred feet farther on he beached his canoe, carried it to the soft ground under some jack pines and proceeded to kindle a tiny fire. The fish was split lengthwise and turned back like an open

book, then impaled on a forked stick and propped before the quickening blaze. Occasionally the small fire was fed with slender sticks; otherwise, there was no effort on the part of our lone traveler to make camp.

I was interested in knowing something of the English River Indian and as this fellow had camped in open view of us I had the temerity to call on him. He spoke practically no English, and the few words of the Ojibway language that I knew made a brief conversation. I drew a hasty picture of his equipment for comparison. It consisted of the canoe, which had been turned over to form a shelter, under which was thrown a rabbit skin blanket. A Winchester rifle of 30-30 caliber, worn bright from use, lay across the blanket; a coarse fishline with a spoon hook was wound about two pegs on a thwart; and a short thin-bladed butcher knife completed the outfit. Yet, with no other than this abbreviated equipment he had come almost two hundred miles from the interior. He lived off the country, catching his dinner as he traveled; and at night, slept in the rabbit skin blanket under the canoe. At daylight he was gone, having, no doubt, eaten as breakfast the balance of his fish. There was no packing of paraphernalia. The canoe was placed in the water, the blanket in the canoe—and away. I pored over the lavish accumulation of our two packs and found nothing with which we could dispense. A feeling of envy permeated my system.

Two days later we left the Winnipeg River behind with its spectacular waterfalls and canyons, and came to the mouth of the English, where it empties its great flow into the Winnipeg. Here is truly a wilderness river, rising in the wilderness and terminating there; so that only those who will labor over water and portage might see her sovereign valley.

Up to this time the wall-eyed pike of the Winnipeg had so supplied us with food that our grub pack was scarcely diminishing at all. We wondered what our luck would be in the English. Our thoughts were mounting in favor also of seeing some of the lesser known Sturgeon River, which we had been told by the Indians at Tetu Lake was a very interesting body of water. But we were measuring the food bag with our geographical extensions. So far, at least, our prospects were good.

Then we came to a magnificent waterfall where the English pours her entire crystal flow into a canyon of solid rock. Below were eddies that enlivened the nimrod spirit within us. We camped below the falls. Jim, having promised to signal if the English put forth her kind, took the cuttyhunk and a large spoon and disappeared behind a rocky crag. I drove tent stakes and fed a fire that was shooting tongues of flame at a kettle of rice. My spirits were high for I was thrilled with the English and I sang to myself the peace of happy voyagers.

Suddenly, out of the roar of the falls I heard a yell that pierced the skies. I dropped everything and ran to where I had last seen Jim. I discovered him ten feet from shore on a rock no bigger than his hat, trying to keep balanced while the cuttyhunk line raced about in the eddies. "O, you glorious English!" I said to myself; in fact, I believe that I shouted it internally. Here was a river after a man's heart—a river whose beauty was only rivaled by the mystery of its depths—and they promised in a minute to be gradually revealed to us. The racing of the cuttyhunk slowed down a bit, and then Jim in his moccasined feet leaped a man's length to the rocky ledge. For a second the line went slack. My heart dropped into my stomach but climbed back again when a splashing and a churning of the water took place at the foot of the ledge. In a moment Jim held up where I might observe a six-pound wall-eyed pike.

After unhooking the pike, Jim whirled the clanking spoon about his head and then let it soar through the mist of the

falls into the whirling cataclysm below. In five casts following there were pulled from those eddies five beautiful white-meated wall-eyes. Jim then busied himself at the task of preparing one of these beauties for the pan, packing the rest for the trail. Fifteen minutes later he came to me with some large white pieces which I dipped in corn meal and tempered over a steady fire. Such was the promise of the English.

The elements had been unusually kind to us so far with only an occasional shower. Toward dusk the wind shifted from the west to the east, and a threatening cloud bank piled up over the darkened spruces. From the east the wind shifted to the northeast. This gave promise of a rough night ahead, so we stretched a silkline fly before the tent, and built a comfort fire under its protection. Then came the onslaught. The skies let loose their torrents, beating down on that nomadic home of ours until its walls and roof fairly sagged with the weight of the tempest. All night it kept on and in the morning the English had risen several inches.

Emerging from our beds we found the wind had abated but the sky was overcast, and there promised to be days of wet weather. Jim reminded me that this was about the time for the equinoctial storms and that we would probably have to "go over the hump," as the backwoodsman says, before we would get fair weather again.

We were surprised to see a canoe pull into the waters below the falls as we were preparing breakfast; then another, until three canoes beached near the eddies. We found that it was Baptiste Fisher, the Hudson's Bay Factor at One-man Lake Post, with his Indian packers going in for the winter. An aspect of the dramatic shrouded these figures, and there was something of the romantic about them as well. We talked to Fisher while the packers carried the winter supplies over the falls. He told us of the high cost of transporting provisions and equipment into the wilderness; that the Indians were bringing their furs to the railroad more every year as they had discovered the higher prices paid there, besides offering a big time in the spring for these dwellers of the silent places when they met in a great council near some railroad or waterfront town. At the top of the falls we watched the little flotilla of heavily laden canoes disappear around a curve in the river; and there came thoughts of big snows and the falls of the mighty English, held in the powerful grip of winter; of lonely trap lines followed by dark skinned figures in a land veiled in white mistery.

Deer had been seen in abundance but we withheld our fire as there had been no pressing necessity. Our food bags still weighed heavy on the portages while fish and small game were on the wilderness shelves. We were in a very good moose country and therefore decided to take the day off and explore afoot the marshy district to the east. With an empty canoe we shot a small stretch of rapids and there abandoned it for foot travel, reaching the marsh late in the afternoon. As our view there took in about a thousand acres, we found a salient point and with glasses scanned the edge of the forest. As the afternoon began to fade, several deer came out to the water's edge scampering about in a playful frolic. In our concentrated interest in these white-tails we had failed to look across and to the right of the marsh. There to his knees in the grass stood his royal highness, a bull moose. He had not seen us and the wind was in our favor. We guessed the spread of the horns and estimated the range. I leveled the carbine and took careful aim, but I did not pull the trigger. I had gone through all the motions of a thrilling moose hunt, with the exception of touching off the death dealing missile, and felt satisfied. The journey up the English would not permit the burden of a head even though the season was open at that time in Canada. Just before we left the marsh in (*Continuing on page 382*)



Reed Bailey

Where the balance of Nature has broken down. A cut on the Upper Kanab Creek in Southern Utah which has washed out since settlement. The area all about is badly depleted of vegetation and the channel is now twenty-two feet deep and nearly fifty feet wide and actively growing in width.

KEEPING NATURE'S BALANCE ON THE WESTERN RANGE

When Normal Erosion is Disturbed the Pendulum Swings to Destruction

By WILLIAM PETERSON

THE public has become so accustomed to thinking of the Civilian Conservation Corps in terms of tree planting and forest improvement that one of its objectives, that of erosion control, has gone too largely unnoticed. But in the West, particularly in the great country romantically associated with cowboys and sheep wars, where soil erosion is ever a real problem, thousands of youthful members of the Emergency Work Corps have been thrown into the battle of aiding nature maintain its balance in the erosive process of the earth's surface.

And it is a battle of great importance, not only to the livestock industry and other users of the range, but to the cities and communities within or bordering its vast domain. For while a large part of the western range is func-

tioning under normal or balanced erosive processes, great areas have been misused to such an extent that abnormal erosion, with its consequent devastation, has set in. Flat valleys, well covered with vegetation, have been reduced

through hazardous floods to deep and useless gorges, areas showing destructive erosion are increasing with no evidence that there has been a change in the rate or time of rainfall, and surface soil with its organic mulch is being moved more rapidly than plant life can readjust and maintain. Unless something is done to aid nature in regaining its natural balance in these areas, destruction will proceed with accumulating speed.

Erosion on the western range has been going on for hundreds, perhaps millions of years. As with every other portion of the earth's surface above sea



Photograph by Shoemaker

Good mountain range with no erosion problem. The area is balanced and carries the normal vegetative cover.



Walcott Mountain, in Colorado — an area in which Nature has never established a balance and which shows the result of rapid and uncontrolled erosion.

W. I. Hutchinson

process. Geologists have measured the normal rate of erosion as weathering and transporting a foot of soil or rock in a period of from 3,000 to 8,000 years. At this rate plant life will maintain and the earth's surface will appear to be stable.

Thousands of acres of western range lands have never developed this balance. The diastrophic movement which made the mountain ranges has produced steep escarpments and projecting ledges. There are still steep slopes where the gradient has been such that as fast as any particles were loosened or weathered by frost, wind, or water they were immediately

level, it began as soon as the land was raised above the sea and will continue until it is again reduced to a base level or a low stream gradient toward the sea. It is brought about by the action of heat, frost, wind, rain and snow, as well as by the chemical reactions from the atmosphere and percolating water.

In the West erosion was emphasized very definitely by the glacial period. During that time the rainfall was increased and in places where there was no ice, streams were swollen, canyons were scoured, eroded and dug deep. During the years that followed the glacial period many canyons accumulated a fill. Today it is quite common to find streams perched fifty or even two hundred feet above the bottom of a solid rock gorge, flowing over fills of debris deposited since the glacial period. This condition will remain unless some unusual disturbance takes place.

In the erosive processes there is a definite tendency to set up a balance that will maintain a normal rather than abnormal rate of erosion. This balance is between rainfall, gradient, soil types and vegetative cover. Where the balance has been established the soil area is stabilized, and seems to be fixed, but where the balance has not been established abnormal or destructive erosion may be in

ly removed to lower levels. In many of the areas of the younger geological formations, such as the abrupt ledges of the triassic and jurassic sandstones, Mancos shales of the cretaceous and Greenriver shales of the tertiary, a balance in erosive process has never been attained. The shales have low water absorption and contain a high percentage of water-soluble materials; therefore, they are poorly adapted to the growing vegetation and disintegrate rapidly. Because of this such areas induce quick run-off which may result in destructive floods.

The rate of erosion is influenced by the rate of the run-off of water. The rate of run-off is dependent upon soil type or rock surface, the amount of rainfall and the rate at which it falls, the amount of snow and the rate at which it melts, the slope or gradient of the area, porosity or water-absorbing capacity of the soil, vegetative cover, and the amount of organic material or mulch in the surface soil. These factors are vital, and in areas of moderate gradients, good soil and fair rainfall, a protecting vegetative cover will hold the area in balance and allow only normal erosion.

Normal erosion may go on moving a foot of the surface in a few hundred or perhaps a few thousands years, but

the vegetative cover would readjust itself and maintain. Under the conditions of abnormal erosion the area which is in balance would be disturbed and the soil would erode so rapidly that plant life could not adjust itself. And just as there are areas which have not yet attained a balance there are areas so delicately balanced that little disturbance is necessary to cause erratic erosion. This disturbance usually comes with the removal of part of the vegetative cover.

There has been little change in either gradient, soil type, amount or rate of rainfall in the last few hundred years. The factor most likely to change is the increase or decrease of vegetative cover. Plant growth is dependent upon plant food and moisture. The limiting factor of plant



F. G. Renner

The beginning of the story of abnormal erosion—the vegetation has been removed and gullying, which may upset the balance of the whole area, definitely started.

food is usually the amount of nitrogen which is related to the organic material in the soil and its moisture absorbing capacity. If the vegetative cover is burned or grazed too closely the normal organic contribution to the soil gradually lessens. The growing plants become stunted, even starved. The better forage plants will give way to the poorer varieties, and even these will become endangered as the organic mulch on the surface and the root system below the surface become less potent. At the same time the moisture absorbing capacity of the soil is lowered with the result that the run-off is increased. More run-off means more erosion.

When the soil is denuded of its plant cover it will readily disintegrate and, instead of water moving over the surface slowly, gullying will set in, and with it is developed the hazard of floods.

In areas, especially in the West, of variable gradient and with a sparse vegetative cover, much of the land is just to the point of balance. As a consequence, the removal of even small quantities of vegetative growth will prove disturbing. Often this is not noticed at once. The vegetation may decrease gradually over a period of years, but when it has arrived at the point where the cover is insufficient to keep the balance, a heavy rain will immediately start disintegration. The removal of too large an amount of plant cover does not usually result in abnormal erosion in a single year, or a series of years, but where sufficient seed development does not exist and where the ground is tramped too intensely by feeding animals, the processes of erosion are greatly speeded up.

This quite naturally brings up the question of how much vegetation might be removed and still maintain normal conditions and stability. It has been estimated that at least fifteen per cent of the plants' annual growth in the arid West should (Continuing on page 381)



G. D. Pickford

As the story progresses chapter after chapter of devastating destruction is written. Note the broken fence—and the perpendicular sides of this wash, in Salina Canyon, Utah, formed in the last few years.



Strawberries—millions of them for the delectation of the amateur browser!

OF COURSE, it may be that a cow is incapable of esthetic appreciation. I admit that I never knew a cow with an ear for music, or even an eye for a view. Yet there is an air about a well-bred cow—especially when she examines a high-heeled flapper fresh from the city—which suggests an unsuspected depth of bovine intuition; and if you would see soft eyes melting with rapture, come upon a Jersey heifer in forbidden clover. There is more to a cow than milk and a moo.

The cow is a connoisseur of tastes. To her all nature is a catalog of flavors. Her nose sniffs its way through the whole of Gray's botany, sorting and identifying. And may there not be as high an order of enjoyment in a carrot as in a Corot?

As a poet delights in a sunset, so a cow puffs at a newly-cut stalk of corn. She goes about the world munching and crunching, gathering contentment, and packaging it into a cud. She chews it over and over, a living monument to the solid satisfactions of existence. There is a far-away look in her mild eye—her thoughts are turned inward, Buddhalike, but with an object of contemplation less vulgar than the navel.

Now this fine art of browsing, this capacity for selective and reflective mastication, is a field of endeavor by no means closed to mankind—a field, too, which offers a simple escape from ticker, bridge, radio and gin. For a human to view the world through the mouth is not so impossible as one might suspect. At least he can try his tongue at it.

I present the bill of fare offered by the woods of northern Ohio. It has its limitations. This part of the State is too far north for persimmons, too far south for blueberries. To a man without a gun or a fish-hook it holds out little hope of sustenance. Busy indeed would be the fellow who tried to keep alive upon wild strawberries or beechnuts. Nevertheless, in the course of the seasons, fully fifty flavors are ready for the sampling.

In early March, while the morning snow is still crisp upon the leaves, a brisk scratching, like that of the brown thrasher, in the right spot, will disclose wintergreen berries and checkerberries, red and plump. The former are delicious—the latter crunch well, but their flavor is so fleeting as to be practically non-existent. Yet, taste or no taste, there is a certain zest to picking berries in the snow.

Later, when "pepper-and-salt," *Erigenia bulbosa*, is sprinkled lavishly over the forest floor, and the first hepa-

BROWSING

61

DON KNOWLTON

ticas and spring beauties are venturing to unfold, the wanderer in the loamy bottomlands comes upon patches of what appears to be new lush grass. They are leeks. Onions in miniature, mildest of the tribe. They come up by the handful. Douse them in the brook, pull off the roots, slap them between thick slices of rye bread—there, indeed, is a meal! And for dessert, nibble the pungent yellow blossom-buds of the spice-bush.

Windswept April is the time when countless old ladies with baskets gather dandelion greens by the roadsides. But in the woods there is stronger stuff. Dressed up in the best of fashion, with broad showy leaves often mistaken by the city-dweller for lily-of-the-valley, the wild garlic takes possession of whole hillsides. This is the time to pack a lunch of cold veal. In fact, the passion for wild garlic sometimes approaches a vice. I once knew a golfer who, in the spring, always disappeared on the fifteenth hole, and who would be discovered in the rough, digging garlic with his niblick.

In trillium time, the sassafras buds unfold. The customary method of enjoying this extraordinary flavor is to dry the bark of the root and brew therefrom the traditional sassafras tea. I prefer to nibble off the ends of the young stalks, leaves and all, in May. If you ever feel an uncontrollable desire to emulate a giraffe, there is your opportunity.

Meanwhile, hugging the ground, the wild ginger puts forth its broad leaves, and hides its queer dark-red blossoms close to the earth, as if it were ashamed to exhibit them in public. The root is really gingerly, and not unpleasantly so—but a taste is enough. It lingers.

June brings wild strawberries. Amateur browsers make the mistake of attempting to pick individual berries. This is messy. The proper way is to pluck the whole fruiting stalk, and pull off the ripe berries with the tongue and teeth, as a cow picks an apple from a tree.

The service-berries ripen with the lengthening days. Most ramblers



Florence C. Burnell

The inner bark of slippery "ellum" intrigues chiefly by its "feel."



Early in spring the woods offer leeks,—onions in miniature, mildest of the tribe.



Sassafras buds in trillium time—for a delicious morsel, nibble off the ends!



Ginseng is a small plant with a pungent, tuberous root of high medicinal value.



What grows in the woods in December—always near water, never freezes? Watercress!

know the service-berry—shad-bush, Juneberry—as the small tree which paints odd nooks of woodland white in April. But the birds (and, they say, in the southern mountains, the bears as well) esteem highly the clusters of the small red fruit. It has a rare taste, and is well worth a climb.

With the advent of mid-summer, the open fields offer a whole series of assorted flavors. There are oxalis and sheep-sorrel, to children known indiscriminately as "sourgrass." There are spearmint and peppermint, the former often growing on golf courses conveniently near to the locker room. There is a catnip, always good for a nibble or two. And blossom buds of the wild mustard are excellent.

To chicken to be baked beneath campfire coals in late June, add two sprigs blooming mustard, two bulbs wild garlic, one dozen leeks, three twigs spice-bush, one root wild ginger. Serve garnished with green leek tops.

Sweet-flag grows in the sunny swales. In appearance, it is half-way between cat-tail and iris. Recipe: two cups brown sugar, half cupful water. Boil until drops of syrup harden instantly in cold water. Dip four-inch lengths of cleaned sweet-flag roots into syrup, set on wax paper to cool. There are all-day-suckers that really last all day!

The inner-bark of the slippery elm—or "ellum," as the "hired man" calls it—makes a particularly moist mouthful.

It is not the flavor that intrigues—it is the feel of the stuff. It slides and slithers from cheek to cheek—it will get away from you if you don't watch out. Think before you talk, or you'll swallow it!

Like the quaking aspen, the wild raspberries, both black and red, quickly take possession of new slashings in the wooded ravines. They bear well in wet summers. The thought of July raspberrying brings recollections of heat, bugs, thorns, dead brush, nettles, and great stalks of wild tiger lilies scattered among the brambles. Of all our wild fruits, black raspberries are, to me, the most delicious.

The wire-like briars that tear at your laces and trip you up when you cross a field that has too long lain fallow, are dew-berries—and toward the end of July a stray vine, here and there, will produce a fruit which is a creditable imitation of a blackberry. It is a harbinger of the feast to come.

For August is the month of berries.

There are blackberries everywhere—the low bushes bearing round sour berries with big seeds, that grow in the open pastures; the tall, sturdier bushes bearing long, tapering, sweet berries with small seeds, that grow in the shade of the deep woods, especially in rocky clefts and ledges; the thick-stemmed, murderous brambles ten feet tall, growing in impenetrable clumps in wet lowlands, that bear richly flavored



It takes experience to be casual in tasting the plum-like mandrake, or May apple.



For a delicate dessert, nibble the pungent, yellow blossom buds of spicebush.



Oxalis and sheep-sorrel—popularly "sour grass," offer a luscious bit of browse.



Wintergreen berries, picked by the browser in the snow in early March—ummhhh!

berries almost an inch long; the tiny bushes that sometimes cover abandoned farm-lands like a crop, with sweet juicy berries hanging like clusters of grapes.

In the brush lots, the blackberry may come upon a scraggly wild gooseberry bush. The fruit is small and covered with spines. It is a veritable hedgehog among berries. Beware of trying to crush it upon the tongue—it must be cracked between the teeth.

Along the upper reaches of the shale banks, in the higher country, where hemlock and arbutus lend a suggestion of the north woods, a few tiny huckleberries of the low-bush variety reach maturity. But in the deep swamps, where sweetbriar runs riot and brakes grow six feet tall, the high-bush huckleberries raise a handsome crop.

Along the sandstone ledges, where moss hangs green and cold springs drip, the thimbleberry drapes its showy vine. Strange bit of vegetation! It has a leaf like a grape, a blossom like a rose, and a fruit like a red raspberry, though much larger and flatter. And you would swear that the flavor of the berry was synthetic. It is vaguely reminiscent of ten-cent store hard candy.

Now and then, in the brush, one may come upon a mulberry tree before the birds have robbed it. Jar the tree, and the ripe berries fall. They are long, black, and tasty.

To a palate surfeited with berries, the August woods, by way of antidote, offers three wierd flavors—oak-ball, ginseng, and mandrake. The oak-ball, green and sour, is a partly hollow, pithy deformity on the oak twig, caused by the "sting" of an insect. Ginseng is a small plant with a tuberous root highly prized by the Chinese. It tastes like a drug store smells. It hints of quinine and rhubarb and aspirin and paregoric. Yet wild ginseng is still gathered commercially, for export to the Orient.

The mandrake is a clown among plants. In late April, it makes its appearance as a pair of twin white knobs pushing through the dead leaves. There emerges, in May, a forked stalk, with a miniature umbrella on the top of each fork, and a large white blossom in the crotch. The blossom gives way to a green knob which grows into a soft, yellow, oval fruit about the size of a large plum, called a May-apple, though it ripens in August. As the apple matures, the stalk and leaves dwindle, until the golden apple lies on the ground, looking often as if it did not belong there at all, but was some exotic equatorial stranger dropped by accident from the pocket of a stray wanderer.

And the flavor confirms this impression. Directions: bite off the smaller end of the apple, squeeze contents into the mouth, and throw away the skin.

To get that taste out of your mouth, try choke-cherries, red and puckery, or a mouthful of pennyroyal, wee fragrant wanderer in the upland pastures.

Elderberries, once filling for poor man's pie, took on, with the advent of prohibition, a new significance. Nowadays they are seldom allowed to ripen. With the first touch of purple, along come the wine-makers from the city. But in every patch there are a few blooms concealed beneath the thick foliage. Fruit on these stalks grows thicker and juicier than ever, after the wine-crop has been picked. Hence pie-

makers are advised to do their elder-berrying late in September or even early in October.

In September, too, the Canada plum sheds its fruit. Tart and quite tasty are these little plums—but hard to find, and harder still to catch at the right time. They are green today and gone tomorrow. The wild black cherries are ripening all through the early autumn.

Students of fungi find edible varieties in the woods all summer long—but the amateur had best limit himself to the field mushroom and the large white puffball, that are plentiful in the pastures and on the golf courses during the warm rains of early October.

Only a man suffering unduly from a sense of property rights will go into the October woods without a basket—for no matter who owns the land, black walnuts, butternuts and hickory nuts go to the first to find them. There are hazelnuts, too, if you get them before the squirrels; and beechnuts, if you care to get down on your hands and knees and poke around in the leaves for the tiny three-cornered morsels. And as an experiment, try a pig-nut.

Chestnuts have practically vanished from northern Ohio. The last of the fine old groves have finally succumbed to the blight. Here and there an isolated tree still flourishes.

Did you ever eat black haws? The bush belongs, I believe, to the *viburnum* family. In October, the berries hang in thick dark clusters. Suggestion: Stuff mouth full, sit on rail fence and spit seeds.

The pepperidge, twisted and cross-grained, dead-tipped and alligator-backed, has fall berries just as sour as you would expect of that "ornery" individual. The tartness of the berries of the stag-horn sumach is of a different sort—sharp, but pleasant.

The strangest of all native Ohio fruits is the paw-paw. Most people are unaware of its existence. A few have "heard tell of it," but it is as remote to them as breadfruit or hasheesh. Even most farmers have never seen a paw-paw. Yet I have gathered a peck of paw-paws within seventeen miles of Cleveland's public square—and can show you a large paw-paw grove within a mile of Euclid Avenue.

The paw-paw is a small tree, seldom over fifteen feet in height, with leaves much like that of the cucumber tree, and a fruit that looks something like a cucumber and tastes something like a banana, with seeds like those of a summer squash. I say it tastes like a banana—it doesn't, to tell the truth. It tastes entirely different. Yet it is more like a banana than anything else.

The tree seldom bears. The fruit is green when green (blackberries, you remember, are red when they're green) and so is hidden by the heavy foliage. After the first frosts, fruit and leaves both turn yellow and both drop at the same time. Hence it takes luck and sharp eyes to find a paw-paw.

Apple trees have sprung up by the thousand in the brush-lots of northern Ohio. They are not native, of course, and yet they are "wild," not only in that they were not planted by man, but because such seedlings, not having been grafted, revert to type, and produce what is known as "natural fruit."

These wild apples have a tang to them that no tame fruit possesses. But most of them (Continuing on page 384)

TAKE PART IN THE GREAT FOREST RALLY IN SEPTEMBER

On September 5, 6, 7 and 8, at Franconia, New Hampshire, a great Forest Rally has been called by The American Forestry Association. The occasion, its 58th Annual Meeting, in which seven other conservation organizations will join, will be one of the greatest in the history of the forestry movement. Foresters and conservationists from every section of the country will join with the public in a great rally which will take them into the beautiful White Mountains to see forests as producers of timber, protectors of water, preservers of natural beauty, great recreational centers, and builders of men. Visit a Civilian Conservation Camp and hear Robert Fechner, director of Emergency Conservation Work, tell of their purpose. Hear Secretary of Agriculture Henry A. Wallace tell of the place of forests in the restoration of rural life. Other speakers of note include R. Y. Stuart, Chief Forester of the United States, and Henry Solon Graves, Dean of the Yale Forest School.

Do not miss this rally! The American Forestry Association will make your reservations, or you may write direct to the Forest Hills Hotel, Franconia, New Hampshire.

Forest Industries Adopt Recovery Code

Provision Made for Formulating Definite Plan of Conservation and Perpetuation of Resources Through Conference with Secretary of Agriculture and Other Public Agencies

REPRESENTATIVES of the forest industries of the United States met in Chicago on June 30 and cleared the way for speedy and final adoption of a National Code of Fair Competition under the National Industrial Recovery Act. The conference marked the thirty-first annual meeting of the National Lumber Manufacturers Association and brought together probably the most representative group in the history of the industry. Necessary machinery was formally constituted to put the industry's code in final form and to administer it.

Dividing the lumber industry into nine divisions, an Emergency National Committee was permanently created made up of representatives from each of the nine divisions, three representatives at large and one representative each from the retail, wholesale and woodwork trades. A tentative Code of Fair Competition and Plan of Organization, prepared by the National Lumber Manufacturers Association, formed the basis of the conference's discussion. Further consideration and development of the code was referred to the Emergency National Committee which met later in Washington and completed its work. The Code was filed with the Industrial Recovery Administration on July 10 and General Johnson promptly set July 20 as the date on which hearings are to begin. At the same time General Johnson indicated that some of the provisions of the Code are unacceptable to the Administration. He referred particularly to the schedules of minimum wages and hours of labor. The industry, however, he said, will be given an opportunity to make its case at the hearings.

In dealing with the question of conservation, the Code as filed contains as Article X the following:

"The applicant industries undertake, in cooperation with public and other agencies, to carry out such practicable measures as may be necessary for the declared purposes of this Code in respect of conservation and sustained production of forest resources. Such cooperation involves the assumption of substantial obligations by said public agencies and by said industries. The applicant industries shall forthwith request a conference with the Secretary of Agriculture and such State and other public and other agencies as he may designate. Said conference shall be requested to make to the Secretary of Agriculture recommendations of public measures, with the request that he transmit them, with his recommendations, to the President; and to make recommendations for industrial action to the Lumber Code Authority, Inc., which shall promptly take such action, and shall submit to the President such supplements to this Code, as it determines to be necessary and feasible to give effect to said declared purposes. Such supplements shall provide for the initiation and administration of said measures necessary for the conservation and sustained production of forest resources, by the industries within each Division, in cooperation with the appropriate State and Federal authorities; and shall provide steps necessary to secure such prompt change of systems of local taxation of forest property as will aid in preventing the wasteful exploitation of timber."

Commenting on this section, Dr. Wilson Compton, Secretary-Manager of the National Lumber Manufacturers Association, said: "To a large portion of the public the most interesting and most significant feature of the Code we have

just submitted is the energetic manner in which the lumber industry takes advantage of the opportunity which the National Recovery Act gives for establishing effective means of forest conservation and reforestation. Not only is the sustained yield principle of forest management incorporated in the Code, but a conference is requested at once with the Secretary of Agriculture and with such forest conservation societies, state and national forest services and the forest industries to determine practical and effective measures for conservation and sustained production of forest resources which will then be submitted to the President for approval."

This phase of the subject received considerable discussion at the Chicago meeting, following receipt of communications from the Secretary of Agriculture and the president of The American Forestry Association urging that the industry's plan of rehabilitation be based upon sound principles of forest protection and sustained yield practices. In his letter Secretary Wallace said that President Roosevelt had asked him to say to the conference "that he trusts any code relating to the cutting of timber will contain some definite provision for the control of destructive exploitation." The Secretary's letter continued, "the justification for this position lies in the declared policy of the Industrial Recovery Act to conserve natural resources. It lies also in the fact that sound and lasting industrial recovery in the forest industries can be brought about only by practices that will ensure the perpetuation of the basic forest resources and hence be in the highest interest of both the industries themselves and the general public."

In transmitting to the meeting a copy of a resolution bearing upon the same point and passed by the Board of Directors of The American Forestry Association at a special meeting on June 27, Mr. George D. Pratt, president of the Association, expressed the hope "that the Industrial Recovery Act may be the long sought instrument by which the industry, the public and the Government are brought together in a determined and constructive effort to solve the basic problems of the industry and the forest situation as a whole." He further expressed the desire of The American Forestry Association to be helpful in that effort. The Association's resolution is printed in full on page 372 of this issue.

At the suggestion of Dr. Compton, the Board of Directors of the National Lumber Manufacturers Association authorized him to write Secretary Wallace giving assurances that in accordance with the suggestion of President Roosevelt the forest products industry intends to affirmatively act on his suggestion that any plan for administering the Code of Fair Competition will deal with timber cutting policies. To this end the Board of Directors authorized John W. Blodgett, past president; C. C. Sheppard, newly elected president, and Wilson Compton, representing the forest industries, to arrange a conference with representatives of the United States Forest Service, the State governments, The American Forestry Association, the Society of American Foresters and other forest conservation organizations "for the purpose of formulating a concerted and constructive program of public and industry action providing sound forest management."

When the Code was filed, Dr. Compton issued the following statement: "In submitting (*Continuing on page 382*)



The forest camps have given them work, and the opportunity to better themselves while working. They will be ready for the upsweep in American industry.

"REMEMBERED MEN"

The Civilian Conservation Corps—Who and What They Are
as Told by One of Them

By FREEMAN C. BISHOP

I AM a member of the Civilian Conservation Corps—and mighty glad of it. One of the first to be conditioned and sent to a forest work camp, I look upon the opportunity to work and to live in a sane, ordered existence in much the same manner as every other member of the Corps—as almost a Divine privilege. More than that, life in the outdoors has given me a greater balance, both physically and morally.

Because of my previous experience, which included that of a newspaper reporter, I was assigned to headquarters as camp clerk, a position that placed me in close contact with the men who had enrolled in this modern forest army. In a short time I knew of their past, their disillusion, their hopes. I knew, too, of the part this opportunity to work and live in the forests was playing in their lives.

Who are the men who have enrolled in the Civilian Conservation Corps? What brought them into the forests? What do they think of it all? These and many other questions have been answered time and again by the men themselves, by word and by action.

From every region, from every conceivable kind of background, have sprung the thousands of men now in the ranks of the Corps. Unmarried, between the ages of

eighteen and twenty-five, many have been wandering for months in search of work, driven by the relentless urge of hungry mouths among their immediate families. Some were sons of parents once wealthy; others were scrawny from years of near starvation. Many were boys, just turning the corner into manhood, undeveloped and lacking any sort of knowledge of discipline or work. They came to the forest camps, for the most part, in a confused state of mind. They were unfit, unprepared and disorganized. In many cases they were unwilling. The sharp commands of Army officers perplexed them. The new experience of orderly living was bewildering. But they worked and obeyed orders, although sullenly at times.

Then something happened. They grew sturdy. They became bronzed by the sun and wind. They worked willingly and well. There was less resentment to organization. Some were more adept than others and forged ahead. Those slow to coordinate themselves to work eventually rounded into the unified whole. For the most part the continual spirit of unrest vanished. The bugaboo of depression was forgotten, and the blight caused by the months, in some cases years, their families had been supported by charitable institutions was generally conquered.

With certain exceptions, the youths in the forest camps are developing into strong, self-reliant men—a real tribute to the Army and to the foresters.

From the first confused days there has developed an almost unbelievable activity. In the camps there is plenty of bustle and from surrounding woodlands comes the sound of ax and mattock, of shovel and pick. Detachments of men are busy constructing forest "grapevine" telephone lines, the life pulse of fire fighting. Others are resurfacing mountain roads, or clearing out trail. Still others are "swamping out" rights-of-way or constructing fire lines. Details are busy improving timber stands—clearing out the underbrush and thinning the stand of trees.



Thousands came to the forest camps in a confused state of mind, unfit, unprepared and disorganized. But discipline and work, sound sleep, good food and cleanliness, have developed them into strong, self-reliant young men.

The men are happy! They are working!

There are few who have not heard of the wandering bands which infested the European nations during the Middle Ages. They were common plagues, and accepted philosophically as a necessary evil. For the past year America has been developing a somewhat similar class. Men and boys banded together for the common welfare of all. They secured food in any and every conceivable way. They were not thieves: they were hungry. So, too, writers of the Middle Ages relate, were the original members of the devastating bands of their period. Their bands hunted food, and when food was in plenty, and consequently less desirable, they hunted loot.

The wanderings of a great many men now in the forest

work camps started because their homes were places of irking idleness. They helped about the house, and their day was done. Their parents, in many cases, received direct aid from some charitable institution, and the boys resented the fact that they were unable to secure work, which would have relieved the family burden. Their extremely limited supply of spending money was another factor. So when they wanted to travel they merely picked up their hats, donned an extra sweater, and were away.

Other boys came to the forest camps under far different circumstances. They are the sons of parents impoverished through the strange quirks of fate during the past few years. Perhaps they are the sons of parents separated or dead, sons living with relatives and feeling toward them an even greater obligation.

I know a college graduate of the class of 1932 who has been a victim of unusual circumstances. A co-worker in the preparation of a scientific publication during the past year, he is well educated, and of better-than-average intelligence.

"What happened?" I asked one night.

"Nothing much," he replied. "With the last of the family resources, and the work I could get to do while going to college, I managed to eke out the four years. Then,—just nothing."

Behind those calmly spoken



words there was a world of heart-break and disappointment. Hundreds of young men the country over struggled and fought for education only to discover in it no aid to the successful prosecution of their lives.

One youth, slim, black-haired, and full of a spirit which had carried him seven times across the Atlantic, had a different story. A Texan, he was recruited from a charity rooming house. He is Irish and impudent.

Early in 1932 he left his home in search of a job. His wanderings carried him into Wyoming, then east through

the glamorous lights of the larger cities. His trek ended with his toes wriggling under the waves of the Atlantic.

He spent weeks hunting for work and eating in bread lines. In Baltimore the lure of the sea became so strong that he shipped out for England. Returning, he continued in the freighting trade for several months—then jobless again. Finally he heard the call of the Civilian Conservation Corps and quickly enrolled. He has been a hard and successful worker ever since.

I was very much interested in a farm-bred boy who came into the Corps. He took long steps and was able to do as much work as two average men.

He started out working on his father's farm, he said, until the family became impoverished. So he "lit out."

Eventually a friend offered him a job driving a truck. It developed that the truck would be filled with liquor and that it must be driven at night. He shrugged his shoulders. The pay was good, wasn't it? Several uneventful months passed and he was taking care of his family. But one night a police siren warned him. To avoid arrest he drove his truck over an embankment, escaping unhurt. It was no trick to escape.

He wandered North seeking some kind of honest work. It was weeks later that he enrolled with the Corps. He is always busy in the forest. "And," he says, "I'm sendin' home real dough. You couldn't drive me away."

There is the case of a young Jewish boy. He is strong and capable. His parents had a good store years ago but



The dots on the above map tell a remarkable story. Each one indicates the location of a work camp of the Civilian Conservation Corps—1,434 in all. With slightly more than 200 men to a camp, 300,000 young men, war veterans and Indians have been enrolled, conditioned and put to needed conservation work since March 30. The camps are located on Federal and State forests, parks and reservations as well as on private lands.

"I worked on farms here and there, a couple 'uh weeks at a time," he related. "But, shucks, 'tweren't no money at all. Thirty and forty cents a day."

He continued wandering around the country, looking for steady work, and needing it to aid his family.

"I'm away from home about a year, and muh ma, she ain't so well nohow, got worse. Then the fellows all started talkin' about this here tree business. I ain't no extra hand with an ax, but I comes on anyhow."

Today he is axman No. 1 in his company. He has won contests in chopping, and is a diligent worker, proud of his job.

Another recruit had worked in a fashionable apartment building as an elevator boy. He saved some money. One day he received word from his native South that his mother and family were being evicted. They had no money. He hurried home and paid the rent, but lost his job.

lost everything. He worked as a clothing salesman but couldn't earn enough for food. The time came when he couldn't earn anything. Then came many dreary nights huddled on park benches before he "signed up for the forests." He is a general handy man. He gets things done. He is happy. He has found a job.

A tall, soft spoken young man in one of the camps is trying to save some of his money to get into a medical school. He enrolled in the Corps because he had to be at work. Months of idleness had taken from him something he never had been able to identify.

For several years he had been a laboratory assistant in a large general hospital. The work pleased him. He saved money. He was planning to start attending classes in a medical school. But one day the city budget was cut. Laboratory assistants were not essential. Six months later he had worked a total (Continuing on page 380)

ARE STUMPAGE VALUES VANISHING?

By HENRY B. STEER

ALTHOUGH the production of timber is the most tangible benefit of forests in that the value of wood products may be easily measured in monetary terms, it should not be assumed that the practice of forestry consists solely of the production of timber crops or rates as a successful or unsuccessful venture according to whether or not timber crops can be produced at a profit. It is true that forest products occupy a very important place in industry and in our national life. However, even in the case of forests maintained primarily for the production of raw wood, the money realized from the sale of the standing timber is not nearly so important in the economic life of communities as are the wages paid the labor necessary in producing, harvesting, and manufacturing the timber, and the community assets in the form of wood-using industries and pay rolls, as well as the benefits which result from keeping on the tax rolls the forest property itself, the industrial plants dependent on the raw materials produced by the forests, and the homes and property of those engaged in the industry.

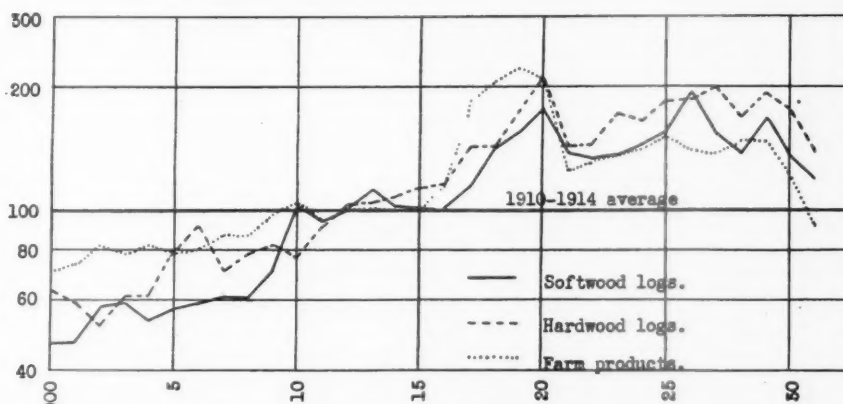
Thus the tangible asset represented by the value of timber crops is in the case of production forests often considerably less than other assets resulting from the wise use of this resource. There are many forest areas whose capacity to produce timber crops is of minor importance when intangible assets such as streamflow and erosion control, recreation, and game protection are concerned. Nevertheless, stumpage and log prices are probably the best index of the stability and intrinsic value of forests as financial investments and they exercise a tremendous influence upon the private ownership of forest land and policies of management.

It is general knowledge that stumpage and log prices in common with the prices of other commodities have declined radically in recent years. So stagnant has been the stumpage market under depression skies and so chaotic the lumber trade and liquidation problems of the forest industries that a belief has become prevalent that timber values are approaching the vanishing point, and that trees on the stump are not worth their "board and keep" as an investment. What basis is there for this pessimistic outlook? Has the shrinkage in stumpage and log prices so outrun the shrinkage in prices of other commodities as to justify a belief which, if true, shakes the whole foundation of economic forestry? The

best answer to these questions, it is believed, is to be found in a comparison of stumpage prices and prices of other basic products of the soil.

At the outset it may be stated that an investigation along this line conducted by the Forest Service does not confirm the above theory of vanishing timber values. On the other hand it supports a belief long held by many that stumpage and log prices are more stable over long periods of time than are the prices of other commodities, especially farm products. More specifically it shows by direct comparison of index numbers of soft wood and hardwood log prices east of the Great Plains and the wholesale prices of all farm products, that timber prices have held a higher average since 1920 than have all farm products. This comparison is given in Graph No. 1, which together with the other graphs here presented are based upon the compilation of stumpage and log prices by the Forest Service and the compilation of other commodity prices by the United States

Bureau of Labor Statistics and the Bureau of Agricultural Economics. Price as used in this connection is the exchange value of stumpage and logs expressed in terms of dollars and cents and is the actual monetary consideration involved when quantities of standing timber or cut logs have actually changed own-



Graph No. 1—Comparison of softwood and hardwood log prices east of the Great Plains and the wholesale price of all farm products, based on index numbers of prices since 1900. Note the higher average maintained by logs during recent years.

ership. Graph No. 1 is an interesting and significant chart, not only in showing the better average maintained by timber since 1920 but in reflecting the strength of hardwood log prices compared with softwoods and other commodities. The general uses of softwoods and hardwoods and the consideration of supply versus demand, offer a reasonable explanation for the greater stability of hardwood prices. The larger part of the softwoods are used for general construction. The eastern softwoods have been thrown into direct competition with the remaining huge reservoirs of western virgin softwoods, and a decline in prices, due in part at least to overproduction of lumber in the West, and to the reduction in general construction activities has been inevitable. Hardwoods, on the other hand, are in much greater demand for furniture and other specialized wood products than for building and structural purposes.

According to the best available information hardwood products did not feel the depression as soon as softwoods, and although there has been recently a decrease in the

amount of hardwood products manufactured, this decrease has been proportionately less than that suffered by softwoods. In other words, the demand for hardwood products appears to be more constant and subject to less fluctuation than for softwoods. There is no vast supply of western hardwoods to fall back on and although the importation of tropical hardwoods has increased, this importation has not relieved the heavy drain on eastern, southern, and central stocks of hardwood timber, which are certainly not increasing. These phases of demand, consumption, and available supply are worthy of consideration in determining whether forestry measures, including reforestation, show the possibility of greater returns from hardwoods than from softwoods.

Index numbers of the average price of all stumpage sales East of the Great Plains and the price of all stumpage sales in the Pacific Northwest are shown by Graph No. 2. The greater stability of stumpage prices in the East is readily apparent. Eastern stumpage prices have not only been considerably higher, especially in recent years, than have those in the Pacific Northwest, but the price level has been maintained a great deal better. Probably one of the more important reasons for this condition is the fact that eastern forests are nearer the centers of greatest wood consumption. Does not this graph, which is based on sales of over 180 billion feet of timber, indicate that production of timber crops is apt to be more profitable in the East?

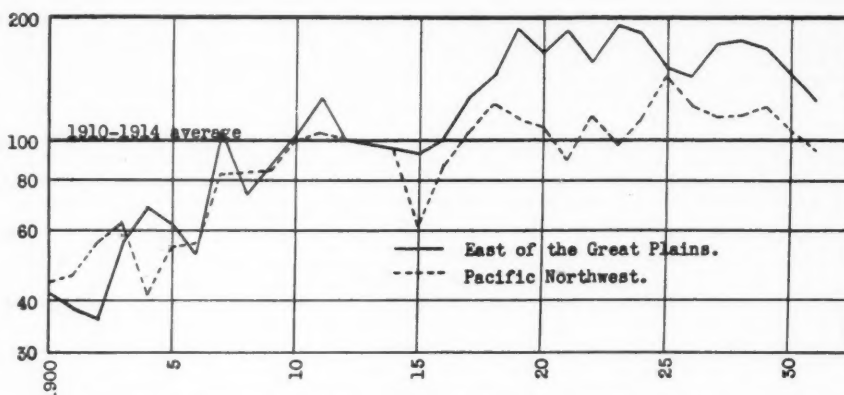
The trend of average stumpage prices in the entire country and log prices east of the Great Plains for the years 1900 to 1931 inclusive with the five-year period 1910 to 1914 inclusive as a base is shown by Graph No. 3. The stumpage record is based on more than 210 billion feet of privately-owned timber and the log record is based on more than 22

billion feet. This graph is of interest only in a general way for the yearly average prices are for all sales, weighted by the quantity involved, with no consideration given to the changing percentages of the different species reported sold from year to year. They are based, however, especially in the case of stumpage sales since 1923, upon sales from the several major timbered regions which are proportionate to the distribution, by regions, of saw-timber supplies.

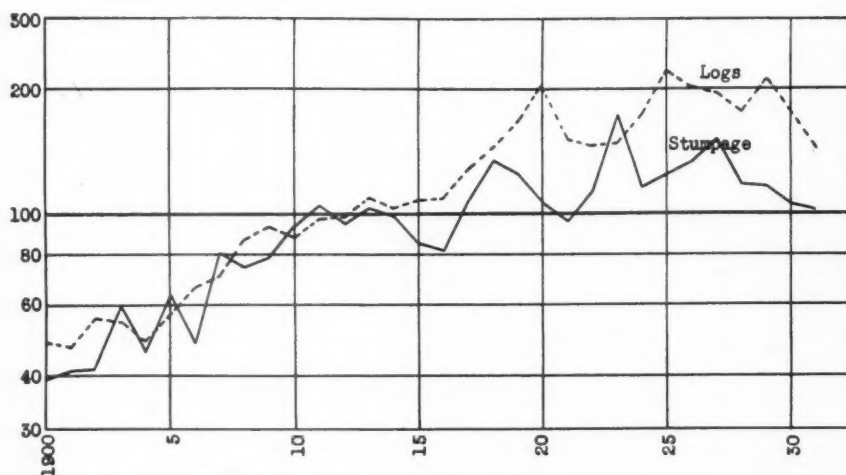
According to the most recent Forest Service estimates, farm woodlands comprise thirty-four per cent of the forest

area, thirty-three per cent of the saw-timber area, and contain twenty-eight per cent by volume of the saw timber east of the Great Plains. Timber is an important farm product in the eastern half of the United States, and the stability of stumpage and log prices as compared to the price of other farm products would seem to indicate the advisability of adopting the practices necessary to keep farm woodlands in a productive state.

Almost one-fourth of all the saw timber left in the eleven Southern States from Virginia to Texas (including Oklahoma and Arkansas) is on farms. The cash income of farmers from sales of



Graph No. 2—Here is shown the movement of stumpage prices for the past thirty-two years in the east and west. The graph is based on index price numbers of eighty billion feet in the east, and one hundred billion feet in the west, all stumpage.



Graph No. 3—This chart, prepared from index price numbers of stumpage the country over and of logs east of the Great Plains, reflects average trends in the United States for stumpage values.

forest products in the year 1930 is significant. Forest products brought to the farmers of these States and Tennessee more than \$82,000,000 according to estimates of the Bureau of Agricultural Economics. For the twelve States combined, forest products cut and sold from farms in 1930 ranked fourth in comparison with the various field crops as a source of income, being exceeded only by cotton, tobacco, and potatoes.

These statistics form a helpful background in considering graphs No. 4 and 5 which compare the wholesale price of cotton with the stumpage price of second-growth southern yellow pine, and the price of flue-cured tobacco, oldbelt

type 11 (peculiar to the Carolinas and Virginia), with the stumpage price of southern yellow pine in the Carolinas and Virginia for the period 1909-1932, inclusive. There is a great deal of significance in the fact that the price trends of timber have been very much more favorable than those of either cotton or tobacco, which might conceivably have some influence in determining whether southern pine forests on land which would produce cotton or tobacco should be managed so that continuous crops of timber can be harvested, or be cut clean, burned, cleared, and planted to cotton or tobacco.

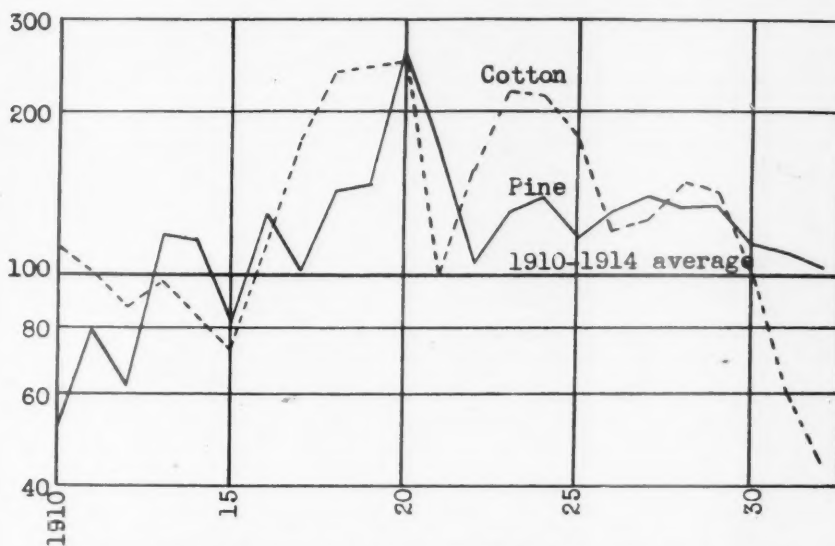
In interpreting these data it should be kept in mind that there are probably some instances where the same timber has changed hands two or more times before being cut and that average yearly stumpage prices can not be based on the same stands of timber. No two tracts of timber are identical, although many may be similar as regards the quantity, species, topography and accessibility. All of the more important factors influencing stumpage prices must vary considerably over a period of years, since standards of merchantability constantly change, and since the natural tendency is to acquire and cut the best and most accessible timber first.

Another fact to be kept in mind is that there has been a considerable falling off in the total quantity of stumpage

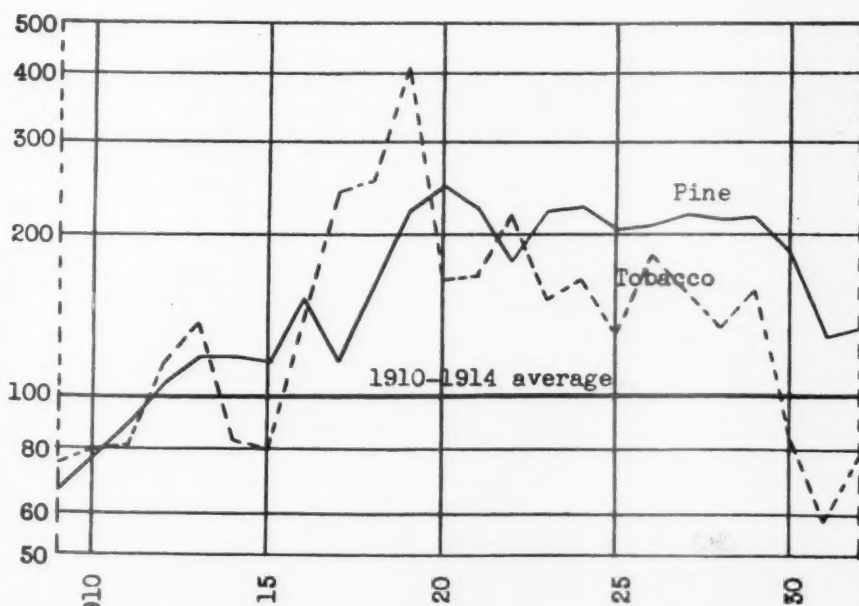
and logs reported sold in recent years, although methods of obtaining the data have been the same. The 1931 volume of standing timber reported sold was only twenty-nine per cent of the 1926 volume, and the 1931 volume of logs east of the Great Plains was fifty-five per cent of the 1926 figure.

An interesting condition partially explaining the relatively high volume of logs reported sold is disclosed by an examination of the reports and is substantiated by the knowledge of those familiar with actual conditions. Many farmers, faced with a great shrinkage in markets as well as price for the agricultural crops produced, have turned to their woodlands as a source of money in the present financial situation. Those farmers having merchantable timber have had (in poker parlance) an ace in the hole. The practice of cutting their own timber and hauling the logs to the mill or railroad instead of selling the timber on the stump is increasing among farmers. In so doing the owner of farm woodlands receives payment not only for his timber, but

for his labor in cutting and hauling it. Probably there were in recent years as many owners of stumpage and as many potential producers of logs who desired to sell as there were formerly, but many declined to do so in view of the low prices which were offered. It is also probably true that there has been a certain amount (Continuing on page 376)



Graph No. 4—When cotton and second growth Southern pine are compared, pine's resistance to the depression is strikingly shown.



Graph No. 5—Tobacco's weakness compared to Southern yellow pine is even more striking. The price trends in both charts are based on index numbers of cotton, flue-cured tobacco (old belt type 11) and Southern yellow pine since 1910.



Here, where a precipitous escarpment breaks the great, rolling Colorado prairie, nest the birds of prey. Here the prairie falcon, bird of the chase and loved for his beauty and courage, makes his home.

THE PRAIRIE FALCON

By ALFRED M. BAILEY AND R. J. NIEDRACH

With Photographs by the Authors

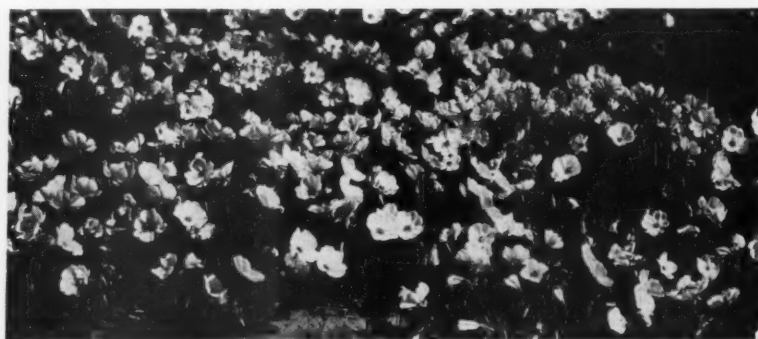
"BIRDS of prey" were once common throughout North America, but owing to our unfortunate habit of considering capable and fearless species as destructive to the interests of man, they have been reduced in numbers. The hawks and eagles are birds of the chase; the majority of them catch and kill their food, but studies of their food habits have shown that there is little excuse for carrying on the warfare of extermination. One of the finest of all these fast flying birds is the prairie falcon, an inhabitant of the open and foothill regions of the West. He is a resident of the range country, and is well loved for his beauty and courage.

Memories take us back to the open region of northeastern Colorado, the extensive rolling prairie which is

broken by a precipitous escarpment running down from Wyoming to cut off the upper corner of the State. It is spring, and great white clouds hurrying across the sky mass over the broken cliffs; mountain plovers rise from the short grass prairie and climb into the sky with slow, methodical strokes of their wings, and then float back to earth as they give their love song, while black-bellied McCown's longspurs go through a similar performance as though to show the plovers

that they, too, can perform antics for the benefit of prospective mates.

A prairie dog village, with the diminutive inhabitants clustered upon the various mounds, stretches as far as the eye can reach, and a "whirling devil" — an infant cyclone — comes sweeping through the little settle-



Below, fields of white prairie primroses dot the landscape like drifts of snow.

ment, sending dust and tumble weeds circling skyward. It is the peaceful time of the year in the West. All nature is awakening; green sprouts of grasses are appearing through the dead growth of the year before, the cactus is showing renewed life, and white fields of prairie primrose appear as splotches of snow across the broad expanse.

As we walk along the edge of the dog town, near the steep escarpment, a great-winged eagle sails out into space from a spot of shadow, where he had been resting unobserved, and flies leisurely along, and then while we admire the beauty of his flight we are attracted by a shrill scream of displeasure overhead, as a medium sized falcon darts with the speed of an arrow at the slow moving eagle. The latter's movements are no longer leisurely, however. He immediately puts on all speed, and with the unwelcome falcon swooping in vicious onslaughts from the rear, much as a small terrier would snap at the heels of a lion, the great bird makes an undignified and hurried exit from the vicinity. A few minutes later, we saw the falcon darting low over the homes of the prairie dogs. He dipped close to the earth and struck one of the rodents scurrying for cover, and, with scarcely slackening speed, mounted into the sky with a young prairie dog dangling from his talons. He circled higher, as though to look us over, and then flew to a pinnacle of rock where we could see him tearing at his prey.

One of us, Niedrach, had "worked" the region for many seasons, studying the various species of hawks which inhabit the cliffs, and a pair of falcons had nested for nine consecutive years in various places along the upright walls. The nests were always in such inaccessible places that it was necessary to reach them from above with the aid of a line, and we, with F. R. Dickinson, were now searching for the



We found the falcon at home, reluctant to leave, for it was a crucial time in her home life. She paused on the edge of the rock shelf, eyeing us angrily, before diving off into space.

falcon's nest in the hope of securing motion films for our respective institutions, the Chicago Academy of Sciences and the Colorado Museum of Natural History. We had a photographer's tent, especially built over a framework of steel rods, which we expected to lower down the cliffs, and we hoped, if the birds were willing, to photograph their family life. It was one of those rare spring days in northeastern Colorado, when the winds blew gently, but the hurrying clouds warned us that we could expect the usual violent gale within a few hours. We climbed the face of the cliff along a water worn arroya, and worked from point to point, searching the face of the walls for a depression which might contain the nest. We felt reasonably sure that the brooding

female must be somewhere near, as the male began to show signs of uneasiness. He left his perch to circle at a respectable distance, giving voice to his displeasure in shrill, plaintive cries. At the head of one of the little draws, a white-rumped shrike flushed from its coarsely woven nest in a low yellow pine, and the adult flew away, low over the ground, with a flash of black and gray wing. Lark sparrows were working busily upon the flats at the top of the cliffs, but as both sexes were present, we felt sure they were not nesting.

We walked along the summit of the escarpment, scanning the walls carefully with binoculars, but could not locate the nest. A half mile from where the male was first observed, however, we saw a massive nest of sticks appearing to hang suspended along a pinnacle of rock which projected into space, and crouched low upon it was a



Eventually the beautiful white falcon sped straight back to the nesting platform. Though distrustful of the blind, she alighted and, apparently reassured that the glistening black lens of our camera was not an active enemy, settled down softly once more upon her eggs.

beautiful ferruginous rough-legged hawk. There was a broken place in the wall, which seemed to promise a chance of anchoring a blind, so we went on without flushing the bird, knowing that we had found something to work on if we failed to find our falcon.

After scanning the cliffs from above, we dropped to the base and worked back over the broken terrain; a small prairie rattler, sunning himself upon a warm ledge, coiled quickly, and started his buzzer working, and then, seeing that we were not going to approach closer, uncoiled and glided into a nearby crevice.

The escarpment was precipitous in this place, and directly above us there seemed to be a shelf with a few sticks projecting. It was not the home of our falcon, we knew, for they rarely line their nests, so a rock was thrown against the walls, as high as possible, and a few loud yells were given. There was a movement above and a great bird launched into space on outstretched wings. We had located the nesting place of a golden eagle, and we had another prospective photographic victim.

Our trail led us across the prairie dog village to the place where the falcon was first sighted. The male was still circling about, now just a speck in the blue, and again a fearless fellow on quivering wing that swooped within gun range time and again. There was one broken piece of cliff that seemed to offer possibilities; we had been unable to examine it from above, but a water worn crevice offered a scant foothold, and Bailey made the climb. Half way up he paused for breath, and over to his left, partially hidden by a projection, appeared a small hole. He took a little rock and threw it in the general direction. It struck the edge of the hollow—and out came the female falcon. And, what a bird! Niedrach had promised a surprise, but such a beautiful hawk was not expected. Instead of the natural brown plumage of the species, this bird was cream white, with occasional markings of the natural dark color. She hovered overhead, shrieking her displeasure at the invasion, and, even at that distance, her black eyes

contrasted with her light-colored feathers. Niedrach has known that particular bird for nine years. She had nested in the vicinity each year, but he had never been able to reach her nest to photograph it, and, in that time, he had never

seen other light-colored falcons, with the exception of one young bird, which had a white feather in the center of the back. Apparently, the young were usually of normal plumage. The nest located, all we had to do was to secure photographs of the bird upon her eggs.

The chances did not seem bright at first, but then we found we really were in luck, for on the other side of the nest was a ledge where the blind could be anchored on a place overlooking the cavity containing the five beautiful brownish eggs. It was not even necessary to use the swinging platform. It is true, there was a scant three feet for the photographer, blind and camera, but that was sufficient. The tent was put in place, anchored with rocks, and left, so the old falcon would become accustomed to it.

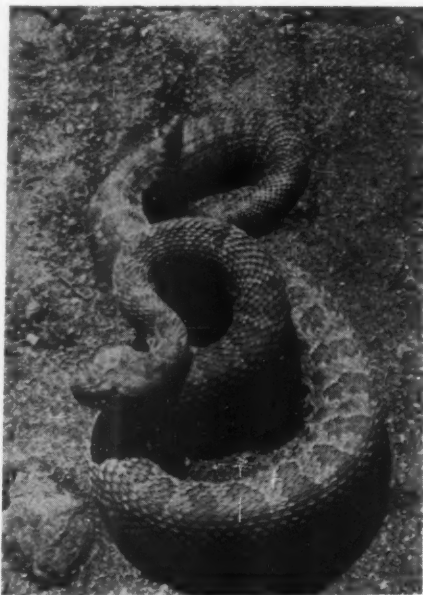
The wind began to blow that afternoon, as winds usually do in that part of Colorado, and we feared for our blind. Our fears were justified, for we visited the place in the evening and found the steel framework with the lashed canvas a quarter of a mile away, hopelessly smashed, at the base of the cliff. Fortunately, there was another blind—and also, fortunately, there was no photographer on the ledge when the wind began. With lines attached to projections on the cliff, and rocks placed upon the steel framework, we were able

to make this tent more secure, and we departed hurriedly, hoping the old one would return to her eggs before they were hopelessly chilled.

Rain and snow swept the prairies for two days and we were unable to reach the cliffs, but bright weather came eventually. When we were within sight of the escarpment, we began to scan them with the glasses, to see if the blind was still in place. At last, it was sighted, in good shape. Now, if the old one had returned—about one chance in fifty—all was well.

The falcon was at home and this time she was reluctant to leave, for she paused momentarily upon the edge of the shelf before diving into space. The reason was obvious. The near side of one of the eggs showed a small pip. By a stroke of luck we had hit upon the one time

when a bird may be photographed, if at all, for few species will desert their hatching young. Birds which ordinarily will stay away for hours will return within comparatively short time. There was room for (Continuing on page 384)



On the broken terrain, sunning himself comfortably on a warm ledge, was a small prairie rattler.



The prairie dog villages are the hunting grounds of the falcon. Swooping low over their little homes, the predators grasp in their sharp talons their tender bits of prey.



EDITORIAL

MAGNA CHARTA

THE industrial Recovery Act brought together in Chicago on June 30 probably the most representative group of forest manufacturers in the history of the forest industry. How the diversified and far flung branches of the industry could be synchronized into an operating unit under the Act was the subject of main interest and debate. Addressing that meeting, Wilson Compton, Secretary-Manager of the National Lumber Manufacturers Association, stated the opportunities with a breadth of vision which it is to be hoped will dominate the spirit and purpose of the whole industry.

"If wisely used," Dr. Compton declared, "the Act may be made to establish a Magna Charta for the forest products industries of America. In what it has fallen my lot to do in this undertaking I have been prompted by a single purpose: to deliver to your industry a fighting chance to reestablish, for itself and for its employees, security and an opportunity to prosper, to perpetuate the forest sources of its own livelihood and to establish this industry in the good-will and confidence of the American people. That chance I believe you now have, with the initiative in your own hands. I hope that you will use it wisely, fairly and unselfishly."

Dr. Compton expressed the conviction that the Industrial Recovery Act offers the forest industries the most promising opportunity yet afforded or likely to be afforded for orderly and effective self-government. "It is an emergency plan," he declared. "If it works it will continue. But it is much more. What is going on in America, as I view it, is a gigantic struggle between socialism and regulated individualism. Uncontrolled individualism has failed. If regulated individualism likewise fails the obvious alternative is socialism in some form, with its supplanting of individual initiatives and its suppression of individual rights. * * * A great opportunity confronts American industry—and a solemn duty. Upon its outcome depends the livelihood of millions of people; and the opportunity to prosper, of every industry. It is a task for honorable men. Statesmanship is finding out which way God Almighty is going and then getting things out of His way."

It remains to be seen what course the industry as a whole will take in moulding the opportunity given it under the Recovery Act into a Magna Charta of new life, public service and industrial stability. That is what the country hopes for and expects. It is the basis upon which the industry is given this opportunity to show leadership. But the public

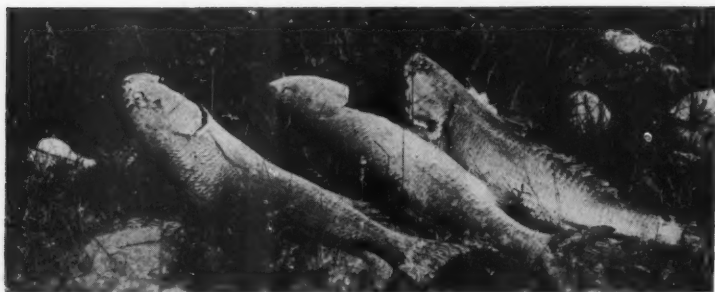
should understand that industrial leadership alone will not solve some of the industry's most basic troubles. In no respect is this truer than in the industry's problem of perpetuating its own material resources by the adoption of sustained yield management and other conservation measures. That problem will not be solved under the Industrial Recovery or any other Act by the public standing off and damning the industry's sins of omission and commission or by merely exhorting it to leadership. There must be public leadership and participation as a corollary of industrial leadership and action if real solution is to be attained.

The forest industry is a heavily burdened industry—more heavily burdened than the public generally understands or appreciates. Its burdens are both of its own making and of public making and they have become rooted in our economic soil. When individual efforts within the industry to operate under methods of sustained yield are real and sincere as many have been, and when public policies have operated to make those methods highly dubious and well nigh impossible financially, the public may well examine the mote in its own eye. The American Forestry Association gave recognition to this situation in its resolution passed on June 27, when it stated that the industry has become the victim of a system of private land ownership which by the imposition of heavy carrying charges on land and growing timber encourages rapid and destructive exploitation, the waste of forest resources and the massing of tax delinquent and abandoned land. To remedy this system calls for public no less than industry action and the public must be ready and willing to do its full part.

Essential as is public action and participation, however, progress under the Industrial Recovery Act, we believe, has its greatest potential source in the industry. If the industry's leaders with the opportunity placed squarely in their laps fail in vision, initiative and planning, they will lose claim to public confidence and cooperation without which they cannot succeed. If on the other hand, they envision the forest situation in its true magnitude as a social and economic problem comparable to agriculture and pool their interests with those of the public in a comprehensive and fundamental approach, public support will be instantly aroused and the industry will stand out in a new light in the eyes of the American people. Then indeed a Magna Charta will have been written.

HATTERAS CHANNEL BASS

A SALT WATER FIGHTER, BEAUTIFUL IN EVERY
LINE AND GAME TO THE LAST



By DONALD N. CARPENTER

THE Coast Guard Station on Core Bank glistened brightly in the July sun as we put our small boat across the shallow waters of Core Sound south of Cape Hatteras, that stretch of North Carolina coast known to every mariner as the place of many storms, rough water and treacherous shoals. We had left civilization, so to speak, behind us, for the coast in this vicinity is practically deserted save for Coast Guard stations, strung out at intervals of fourteen miles. To the east of us was Raleigh Bay, to the north Oregon Inlet. And between these two points, among white spray and gaunt ribs of foundered vessels, we were told, one could find the best surf fishing in the United States.

Particularly was the mighty red drum, or channel bass, active off the famous Cape. And as we dropped anchor after the shoals became too dangerous for the heavier boat, and transferred our duffle and tackle to a lighter skiff, our thoughts were chiefly centered on this salt water fighter.

Captain Baum and his Coast Guard crew met us as the skiff grounded on the beach. Their welcome was warm, so we immediately got around to the subject of fish and fishing. The drums were being caught regularly, we learned, which was information enough to set us to the task of rigging tackle. We limbered our ten-foot surf rods and found them strong and lively. Then we attached three hundred yard reels. The lines

were of linen and tested from eighteen to twenty-four pounds. We rigged up with hooks, piano wire leaders, pyramid sinkers, sandspikes, butt straps, knives, bait and tackle kits. Then we established a base.

The sea was fairly calm and the sun well down when we waded out to make our first casts. I wet my line, well out in the surf, and made a sixty yard cast. Captain Baum and

my companions followed and we climbed back to the beach crest to wait for a strike. We were all pepped up as only fishermen can be, and we did not know what might take our bait. The water is deep off Core Bank and fish of all sizes and kinds follow the curve of the coast close in. Suddenly I saw the Captain's rod dip violently and he struck. After running straight to sea for some yards, the fish turned and headed toward my line. I reeled in quickly and stood by to watch the fun and help land the fish if necessary. The Captain turned the prey successfully and it swam rapidly out to sea again. There was much speculation as to his kind and size. John opined it was a channel bass, and the Captain turned his rod over to him.

After ten minutes of fighting the fish was brought into the surf, and a few moments later we saw a flash of red and gold. It was a channel bass and although not a large one, it was putting up a stiff fight. As it made short runs up and down in the surf, the fish used every



A flash of gold and red and we knew it was a channel bass.

wave as leverage against the pull of the rod. John worked hard but his fish resisted valiantly. He pumped him shoreward many times, only to have him turn.

Finally the fish was led into the shallow water and John waited for a favorable roller with which to run him ashore. It came, and with all the strain his tackle would stand, he slid the fish high and dry. A moment later we fixed the rope gaff in his mouth and pulled him well upon the sand to a safe place. There he lay glistening in the last rays of the sunset—a fish beautiful in every line, and game to the last. John and the Captain were congratulated by all of us, and after baiting up again, we cast out to try our luck.

We did not have long to wait. Bill's reel began to hum and his rod arched dangerously. Again we took in our lines and stood by to give advice and help. And Bill needed advice, as this was his first channel bass. He was being dragged right down the beach as he tried to stop the rush of his fish. We told him to lighten his drag on the line and let the fish run. In the excitement of the moment, he loosened the drag too much and old man channel bass soon had nearly all of his line. Bill finally got the proper

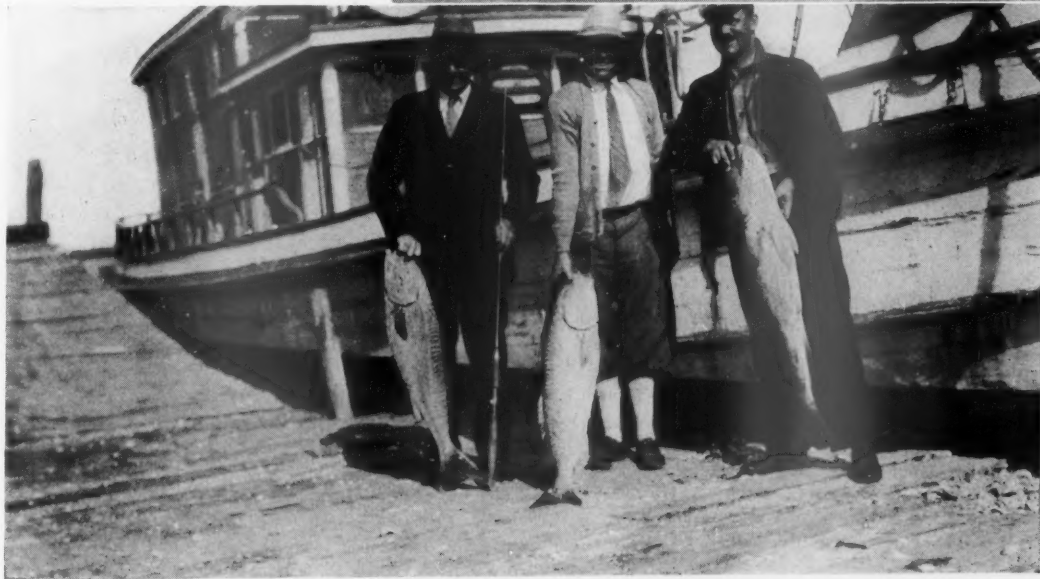
minutes. By following the fish and taking advantage of every turn, I managed by hard work to gain back most of the line and brought the fish into the surf, where it sulked and shook its head like a bulldog.

I turned the rod over to Bill and directed the close of the battle. It was no mean job. The fish was not only stubborn but strong, and was still quite fresh. Short runs with gains of line for the fish kept Bill busy, and after about ten minutes, we saw the bass in the wash at our feet. With the help of a large wave, Bill slid his prize ashore like a veteran. Thrusting my thumb and forefinger into the eye-sockets, I quickly dragged it up the beach to safety, and Bill stood nearby and looked proud. He had hooked and landed his first channel bass in fair fight. Its weight was just un-

Right—In his excitement of the moment, the author loosened the drag too much and the bass soon had most of the line.



Below—Three red drums, or channel bass. The fish on the right weighed fifty-five pounds.



tension and turned his fish. Again, with a rush, the drum took more line and I directed Bill to follow the fish down the beach and try to recover some of it. Bill pumped and ran sidewise like a crab. He gathered in line only to have it ripped out again. By this time I knew my companion had a good one, and taking his rod, relieved him for a few

fished on for a while, but without a strike, and as we were tired out from a drive of 420 miles that day, we returned to the station and accepted the hospitality of Captain Baum.

Early the next morning we grabbed our tackle and started for the beach. The Captain did not accompany us, as he said it was bad luck to fish on (Continuing on page 376)

der forty pounds.

Again we baited up and cast. This time I had a sharp strike, and after a brief but interesting fight, beached a bluefish of about two pounds. As I baited up and cast out again, I noted that the sun had gone down and that it was growing dark. We



To this peaceful spot in 1843 came a small band of German Lutherans—pioneers in a new world, seeking religious and political liberty. And here they founded "Kirchhayn," meaning Church Woods. This is a bit of the road leading past the west side of the Church Woods.

"CHURCH WOODS"

By W. KEIBEL

LATE in 1843 a small band of German immigrants came to rest in a beautiful woodland not far from Cedarburg, Wisconsin. They were Lutherans, seeking religious liberty and a place to establish their ideals and their kind. They had, with hundreds of kindred souls, made the eleven week voyage across the Atlantic seeking the virgin forests and productive soil that had been pictured to them in their native land. They found their dream realized in Wisconsin. One group settled at Cedarburg, just north of Milwaukee; another was attracted to Watertown, forty-five miles to the west. But the third group, imbued undoubtedly with keener pioneering instincts, ventured into the great forest wilderness to set up their own colony.

It was this group that came to rest on a wooded hill beyond Cedarburg. The leaders looked around them and beheld a glory that exceeded their fondest dreams. They dug into the soil and sampled the water and then held council. They would go no farther. On this little hill would arise their temple, while flung out on the fertile lands surrounding it their empire would grow. They would call their little domain Kirchhayn, meaning "Church Woods."

Their first act was to purchase from the government eighty acres for church purposes—the beautiful wooded hill from which they had first surveyed the site. Then they located on farms around it. Land was cheap, around \$1.25 an acre. Soon clearings appeared in the forests and log cabins took shape. On the little woodland hill a church began to arise, built of native stone. Nearby a school was erected, and

residences for both the minister and the teacher. Money was scarce, and those of small means bought flour, groceries and other necessities from those better situated by paying them in the form of labor. But their domain steadily arose, and if one today would stand on "Church Hill" and look around, farm houses, barns and properties may be seen which bespeak prosperity. And natural beauty has not been sacrificed. Gaze in any direction and the world seems enclosed by trees.

About thirty acres of the church property have been kept in woodland. Except for the removal of dead timber, the trees remain untouched. Here wild flowers grow in profusion, along with berries of every description. In the summer members of the church, armed with pails or baskets, may be seen almost daily reaping this rich crop. Nature lovers find a quiet retreat in this woodland. Hunting is forbidden. Birds, squirrels and other wildlife are unmolested. Years ago the minister's cattle and horses ruminated in these woods, feeding on the grass, resting in the shadows of large trees. Today the automobile has replaced the horse, and milk is obtained from farmers near by. Hence horses and cows are seldom seen in the woods.

In the center of the wooded area is an open-air church auditorium—the real reason why these woods have been kept intact. Here, annually, in August, the church observes a mission festival with morning and afternoon devotions. Neighboring ministers and congregations are invited. Visitors are welcome. At times the audience numbers in excess

of 3,000. The altar and pulpit are beautified with flowers and evergreens. To the left of the pulpit is the band and choir platform. Facing it are the "pews"—boards nailed securely to wooden posts. Great trees provide a shaded roof and serve as walls. Thus a natural auditorium is formed in which sound travels easily with no resulting echoes.

On the Friday before the mission festival the men of the parish are busy erecting the pews, replacing decayed posts and arranging everything in tip-top shape. The following Monday is clean-up day. The boards are removed and stored for another year, leaving only the bare posts.

The annual mission festival is intensely interesting. At ten o'clock in the forenoon the church bells are tolled. The church band, now in its seventy-ninth year, plays a prelude and thereafter accompanies the congregational singing. Prayers, Scripture reading, anthems by the church choirs, hymns, all have their place in the service according to the Lutheran ritual. The high point of this impressive service, as in any other, is the sermon by one of the guest ministers. A postlude by the band concludes the morning service.

By this time it is almost noon. The worshippers are hungry. But no one has need to complain. The ladies of the church have provided a warm dinner, which is served out of doors beneath the trees. A refreshment stand is also provided where ice cream, candy, peanuts and fruit are available.

At 2:30 o'clock the bells again call the worshippers together for the afternoon devotion which is similar to that of the forenoon. Usually there is a greater attendance.

After this service the refreshment stand is again frequented

and supper served. On this occasion old friendships are renewed, and strangers cordially welcomed. After supper the crowd dwindles away, for the farmers must do their chores. At dawn the woods are deserted.

During the summer of 1931 the church building was remodeled. A new altar, pulpit and pipe organ were installed as a fitting remembrance of the seventy-fifth church dedication anniversary. What seemed more natural than to hold Sunday services in the Church Woods? For that reason the pews were not removed until fall. The old rustic altar and pulpit were disposed of and the altar and pulpit which had been used for seventy-five years in the church building were substituted.

The church woods are also employed for social affairs. There is the annual parish school picnic at which the young people and their elders play games and sing. Societies of the church also hold their gatherings in the woods, at times in the evening under the glow of torches and lanterns.

Kirchhayn is so well known and so well liked because of its beauty, solitude and natural surroundings, that not a few other church groups, especially from Milwaukee, hold their outings there.

The people of this parish would never part with their woods. Those who move away hold it in fond remembrance. Seldom do they miss an opportunity to attend an activity conducted in the woods, to enjoy the great outdoors, to meet old acquaintances, and to maintain ancient customs, especially the inspiring open air mission festivals.

In fact, the church woods is the soul of the community.

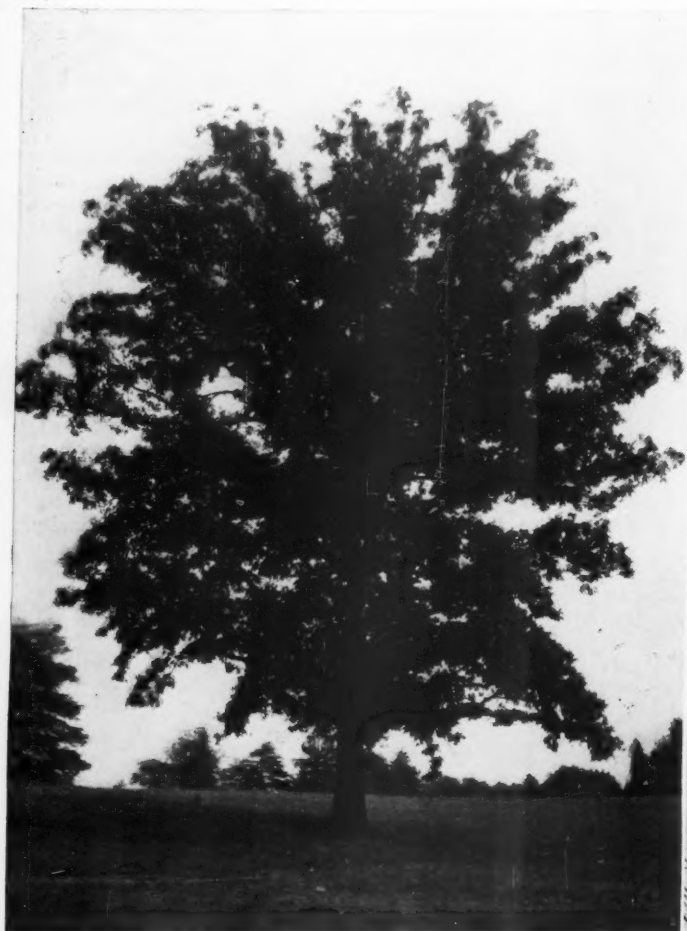


For years, here in these quiet woods, mission services have been held. It is truly a wooded open air church auditorium. The preacher may be seen in the pulpit, and to the right and a little above the audience is a reed organ, placed on the band and choir platform.

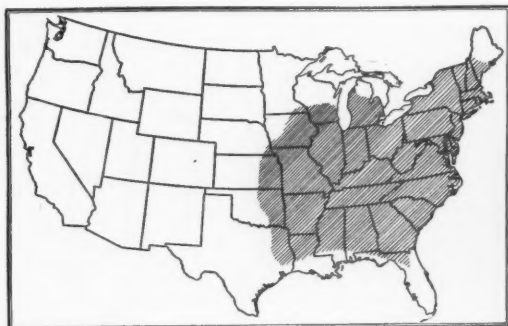
WHITE OAK

Quercus Alba, Linnaeus

CHIEF of all the oaks and outstanding among trees is the White Oak, *Quercus alba*. *Quercus* is the Latin name for oak, while *alba* possibly refers to the light colored bark. It is easily recognized and is a favorite throughout most of the Eastern half of



The wide spreading branches of the open grown white oak form a massive low crown which becomes increasingly broad with age.



Natural range of white oak within the United States.

the country from Central Maine to Northern Florida, and West through Southern Ontario and the Southern Peninsula of Michigan, through Southern Wisconsin and Minnesota, most of Iowa, Eastern Nebraska, Kansas, Oklahoma and along the Brazos River to Southern Texas, excluding only a narrow coastal region along the Gulf. Preferring rich well drained soil, it attains its greatest size in the coves and valleys of the western slopes of the Alleghany Mountains and in the bottom lands of the lower Ohio Basin. There it attains a height of 150 feet and occasionally six or eight feet in diameter, but is more commonly sixty to eighty feet high. Individuals have been known to be 800 years old.

While trees grown in the deep woods are tall and narrow crowned, as compared with the broad round heads of open grown trees, the pale gray bark with shallow fissures and scaly ridges is usually characteristic. The bark on old trees may be two inches thick. The leaves are alternate, from five to nine inches long, narrowed toward the stem, somewhat oblong in outline but usually with the broader end forward, and with seven to nine smooth-margined finger-like lobes. They turn russet in the fall and hang on through much of the winter. The buds are round and smooth, clustered at the tips of the twigs



so as to give the effect of a clenched fist. In cross section a twig reveals a five pointed star-like pith.

In May, when the new rose colored leaves are scarcely one-third grown the fringed catkins of the staminate flowers and tiny close fitting clusters of pistillate flowers appear. The acorns mature during the early autumn of the same season. Accordingly, white oak carries no acorns during the winter. The shiny, brown nut is three-fourths of an inch to an inch long and set about one-fourth its length in a shallow cup which is attached directly to the twig or by a very short stem. Squirrels, other mammals and birds enjoy the sweet flavored nut so that comparatively few sprout into seedlings. The early colonists learned from the Indians ways of boiling and preparing them for food.

The light brown wood weighs about forty-eight pounds to the cubic foot when air dry, which is nearly twice the weight of white pine. Its uniform strength, narrow growth rings, durability and attractive color encourage a wide variety of uses, ranging from fine cabinet work and interior trim to flooring, railroad ties, piling, barrels, veneers, bridges, ships and building construction. Originally desired for its strength and durability, its beauty for furniture, floors and interior trim is now of first importance. Quarter sawed oak reveals large numbers of "mirrors," which are the split medullary or pith rays. These form a pattern prized for many purposes. Tannic acid in the wood protects it from some fungi and insects, but results in unsightly discoloring when iron nails are used on exposed surfaces.

Lumber statistics do not distinguish the cut of white oak from that of the other commercial oaks, but fully half of the 1,661,691,000 board feet of oak reported as cut during 1930 was white oak. Much of this came from Tennessee, Louisiana, Arkansas, Virginia, Mississippi and West Virginia. Reports for the past twenty years show marked decreases in annual production of oak. Recent estimates of the United States Forest Service indicate a present stand of merchantable oak saw timber totaling 60,753,000,000 board feet, together with over 230,000,000 cords of wood on second growth areas. More than half of this is growing in the Southeastern states and a quarter in the Central states.

White oak has few natural enemies and the worst of them is fire. The oak timber worm or pin worm is destructive to timber values, a twig pruner causes owners of shade trees to be alarmed but is seldom fatal, and the gypsy moth may prove serious within its limited range. Several fungi cause heart rot. Fire and gypsy moth may be controlled and injuries caused by these enemies are often responsible for other difficulties.

Little attention has been given to propagating white oak either for ornamental or forest purposes. This may be due to its slow growth and the strong tap root which makes transplanting difficult, but white oak is splendidly adapted for city streets, home lawns and parks. The broadly spreading branches form a round top more than eighty feet high and fully as broad. For best development the young trees should be planted about forty feet apart, and eventually thinned to about eighty feet to give room for maximum crown development.

The acorn is the principal means by which white oak trees reproduce themselves, but under favorable conditions it will sprout from the stump. Seedlings may be grown in nurseries and transplanted, or the acorn may be planted where the tree is desired.

Glossy leaves with five to nine rounded lobes and sweet meated acorns whose shallow cup covers about a fourth of the nut are characteristic.



Pollen bearing staminate blossoms appear in May when the first leaves unfurl. Inconspicuous pistillate blossoms from which the acorns develop are at the base of the new leaves.



Light ash gray bark with scaly plates and shallow fissures help distinguish the older white oak trees.



A FOREST PAGE FOR BOYS AND GIRLS

Conducted by WAKELIN MCNEEL



FISHIN' TIME



MANY of our readers are fishermen, skillful and ardent, no doubt, in the piscatorial art. I am an ardent fisherman, and like all of the "ken" boastfully attributed success to skill and failure to any number of imaginary causes. Every fisherman has a vast fund of such "excuses" at his command. Honest as the daylight in all other manners, he is a juggler of truth when it comes to fishing. Young folks who stretch their imaginations to account for their fishing failures and successes are apt to deviate widely from the truth in other matters. When there is a leakage like this, fishing becomes a pernicious art.

Anyone who teaches fishermen to rely on facts to account for the size of their catch has done much for the moral good of the order. The interesting observations of Professor Havilah Babcock, Director of Extension, University of South Carolina, in this article will furnish authoritative reasons why fish bite or do not bite. No longer will we be forced at all times to set our tongues and conscience against the truth. Moreover, while there is more to fishing than catch-

ing fish, when one ventures forth he wants to know whether he is going mainly to enjoy the landscape, and in leaving home he wants to be able to advise mother whether or not she should pack a can of sardines in the lunch, or to order meat for the morrow.

"When the wind is in the East
'Tis good for neither man nor beast.

When the wind is in the North,
The skillful fisher goes not forth.

When the wind is in the South,
It blows the bait in the fishes' mouth.

When the wind is in the West,
Then 'tis at the very best."

"To many people," writes Professor Babcock, "this ancient jingle is as nonsensical as the time-honored rigamarole about 'rich man, poor man, beggar man, thief, doctor, lawyer, Indian chief,' by which we used to settle the question of our future occupations by the simple expedient of counting the buttons on our jackets. They look upon such 'piscatorial prophecies' merely as idle superstitions which are transmitted from one generation to another, as folk notions which

have little to recommend them except their antiquity. But these particular superstitions do have something to recommend them besides their antiquity. They contain 'more truth than poetry,' and observing fisher folk accord them a pretty wholesome respect.

"For few animals are so weather conscious and so susceptible to climatic changes as are fish. Years of intimate experience and close observation have taught me that they are pretty trustworthy barometers, and that they often detect changes so subtle as to be unobservable by human beings. Major weather developments they can foretell from twelve to twenty-four hours in advance, and most old-timers who are wise in the wisdom of their quarry regard the behavior of fish as a rather dependable indication of the weather that's just around the bend.

"This subject was first brought to my attention, rather painfully be it confessed, by a memorable boyhood experience, when some companions and I embarked on an Odyssey into the recesses of a swamp. We were accompanied by Uncle Henry, a picturesque old codger to whom the labyrinthian mazes of the swamp were as familiar as the kitchen of his own shanty. The glistening black coves of the swamp were teeming with copperhead bream, red breast, and bass, so with the prospect of the whole day ahead of us, 'the goose was hanging high.' But about the middle of the afternoon fish began to lose interest somewhat, and soon thereafter we observed Uncle Henry busily winding up his tackle and preparing to leave. Greatly mystified, we demanded an explanation.

"'Hits a-goin' to rain cats and dogs, and we'd better get out of the swamp while the gettin's good,' he replied.

"'How do you know it's going to rain?' we asked, indignant and skeptical.

"'In the first place, my rheumatism is a-botherin' me, and in the second place fish have stopped bitin' without any reason. That's a sure sign of a change.'

"Being doubting Thomases, we decided that Uncle Henry was a superstitious old fogey, and remained in the swamp: But the fish, although they had been feeding very actively and biting readily a short while before, now quit unaccountably. Nothing could stir them from their lethargy or induce them to resume biting. We sat like patience on a monument and exhausted our collection of lures, but not even the most tantalizing delicacy got a single rise. And the upshot of the whole business was that we were caught in a rain and wind storm that scared us out of our boots, and we had to flounder through three miles of drenching rain. I remember that as I groped my way through the inky blackness and wiped wet spider webs from my face, I vainly wished for the strange alchemy of Uncle Henry's rheumatism which enabled him to foretell storms.

"The one experience I have related might have been coincidence, of course, but I have seen it repeated often and with regularity. Time and again I have seen fish abruptly cease their feeding activities when such cessation of interest was unexplainable. When weather is brewing, minnows no longer disport themselves on the surface, bass stop breaking, and the water goes dead, despite the fact that there may be no observable difference in wind, temperature, or condition of the water. The skies may be cloudless, and weather conditions may be apparently precisely as they

were an hour before, but something has happened, and fish show a disinclination to bite.

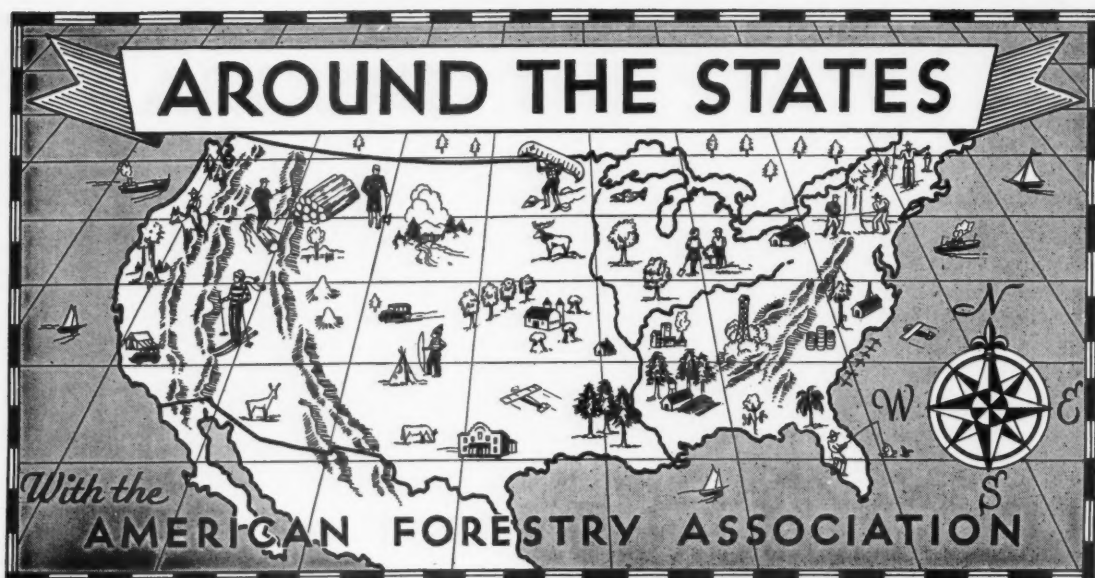
"When fish sense a change of weather, most of their characteristic activities are suspended. They are inclined to go to the bottom and wait passively, as if atmospheric pressure depresses their spirits, as it does with human beings. When a change is brewing, the water becomes strangely, mysteriously dead. One gets the impression that animation has been temporarily suspended, that the myriad activities of water life are being held in abeyance.

"Most fresh water fish are peculiarly sensitive to electric storms. With the first ominous and reverberating rumble, they shut up shop and betake themselves to Davy Jones' locker, where they will remain against all enticements until the storm has subsided, as if in terror of the boisterous display of the elements.

"Yet fish cannot hear! They have no ears, a fact which disproves an immemorial superstition about fishing—that you must not talk if you wish fish to bite. No amount of ordinary talk can possibly disturb them. How many interesting conversational leads have I foreborne to introduce before I discovered this simple (*Continuing on page 378*)



For eyes that see and ears that hear, there is more to fishing than catching fish.



Cammerer Succeeds Albright as Director of National Park Service

Arno B. Cammerer will on August 9 succeed Horace M. Albright as Director of the National Park Service. Mr. Albright will resign to become vice-president and general manager of the United States Potash Company, operating at Carlsbad, New Mexico. At the same time it was announced that Arthur E. Demaray, senior assistant director, would succeed Mr. Cammerer as associate director.

As associate director of the Service, Mr. Cammerer has been especially outstanding in his work in connection with the eastern park projects, including the Great Smokies, Shenandoah, Mammoth Cave, and Isle Royale. He represented the Secretary of the Interior personally in negotiations between the Federal Government and the states and various organizations engaged in acquiring the lands necessary for the establishment of these parks, worked out the park boundaries with the various state commissions, and in other ways assisted in bringing the projects materially nearer to consummation.

Mr. Cammerer, a native of Nebraska, entered the Federal Service in 1904 as an expert bookkeeper in the Treasury Department, being promoted through numerous higher positions to that of private and confidential clerk to several assistant secretaries of the Treasury. He was selected in 1916 as assistant secretary to the National Commission of Fine Arts, at the same time working also as first secretary of the Public Buildings Commission of Congress. In 1919 when Mr. Albright resigned the assistant directorship to become Superintendent of Yellowstone National Park, Mr. Cammerer was selected by former Director Mather and Secretary of the Interior Lane to succeed Mr. Albright. Later, as the duties of the Service expanded, he was made associate director. His close contact and experience of many years with development problems of the National Capital and the administration and

development of the National Parks of the country have prepared him well for the varied and responsible duties of the position to which he has been appointed.

Mr. Albright's career in Government service has been a brilliant one. At the time of his appointment as director of the Service in January, 1929, upon the resignation because of ill health of the late Stephen T. Mather, he was one of the youngest bureau chiefs in the Government service. Under Mr. Albright's administration the National Park Service has

Branch of Plans and Design, the latter covering the landscape work.

During Mr. Albright's service as director three National Parks and ten National Monuments have been established. These are the Carlsbad Caverns, Grand Teton, and Great Smoky Mountains National Parks, and the Arches, Bandelier, Black Canyon of the Gunnison, Canyon de Chelly, Colonial, Death Valley, George Washington Birthplace, Grand Canyon, Great Sand Dunes, and White Sands National Monuments. A fourth National Park will be established before Mr. Albright's resignation becomes effective. This is the Morristown Historical Park, covering an area prominent in Revolutionary War activities.

Mr. Albright retires in his twenty-first year of service in the Department of the Interior. He came to Washington in May, 1913, to join the personal staff of Franklin K. Lane of California, Secretary of the Interior in the Cabinet of Woodrow Wilson. He was later made assistant attorney and continued on the personal staff of the Secretary. When in 1915 Stephen T. Mather became assistant to the Secretary in charge of all National Park activities, Mr. Albright was assigned as his aide. When the National Park Service was organized in 1917, Mr. Mather became its first director and Mr. Albright the first assistant director.

In 1919 Mr. Albright was appointed superintendent of Yellowstone National Park, the first civilian Superintendent of Yellowstone since 1886. While serving in that capacity, he also served as assistant director of the National Park Service.

Mr. Demaray entered Government service in 1903. He received from the King of Sweden the order of the Knight of Vasa for his part in making preparations for the visit of the Crown Prince and Princess of Sweden and for taking personal responsibility for their three-day trip through Yosemite National Park.



ARNO B. CAMMERER



HORACE M. ALBRIGHT

been enlarged both in scope and personnel, particularly the administrative headquarters in Washington. Outstanding among the new developments was the establishment of a Branch of Research and Education in the headquarters office, with officers trained in biology, geology and history to direct the field personnel of naturalists and historians. Another important development was the expansion of the landscape architectural work and the establishment of eastern headquarters of both the Branch of Engineering and the

Waterfowl Hard Hit

Although there now is an increase in a few species of wild ducks and geese as compared with last year, many species still are at a seriously low mark. The status of waterfowl on the whole, however, is slightly better than in 1931, when conditions were so bad that it was found necessary to restrict the hunting season.

The Bureau of Biological Survey, Department of Agriculture, has continued its fact-finding program of the last several years with regard to the status of waterfowl in the United States and Canada. Paul G. Redington, Chief of the Bureau, issued a statement July 10 announcing the Bureau's findings during the last two years.

During the seasons 1931 and 1932 waterfowl had reached the lowest point on record, through culmination of unfavorable conditions, including serious and long-continued droughts in many of the most important northwestern breeding areas. This made it necessary to restrict the hunting season to a single month in 1931, and to two months in 1932.

The present improvement in the status of waterfowl is due to some increase in snow and rainfall, consequent improvement in the food supply, and to saving the breeding stock by reducing the kill during the last two seasons. This statement, it was emphasized by Mr. Redington, is based upon a comparison of the present with 1931, the poorest season ever experienced.

While ducks and geese as a whole are now in somewhat better condition than last year, he says, increased numbers are confined largely to a few species, which for the most part have extensive breeding ranges. Among these the mallard, pintail, black duck, baldpate, Canada goose and the blue goose are most in evidence. Ducks with more restricted breeding territories, including the blue-winged teal, lesser scaup, bufflehead, gadwall, shoveller, canvasback, redhead and the ruddy duck are in many localities fewer than during the previous season.

In other localities they are just about holding their own, and where they do show a slight increase they are still in a state so precarious that an unfavorable nesting, hatching or rearing season, or combination of other unfavorable circumstances, might easily lead to disaster, says Mr. Redington.

Possibilities of such unfavorable conditions are indicated by reports of excessive temperatures and low rainfall during June in the northern part of the Great Plains region of the United States and adjoining southern parts of the Prairie Provinces of Canada.

Beech Disease Reported in New England

A disease which has destroyed approximately a third of the beech trees of Nova Scotia and many of the beeches of southern New Brunswick, has now been found in Maine, and the European beech scale, an insect which apparently precedes outbreaks of this disease, has been found in Massachusetts, the United States Department of Agriculture reports.

The fungus causing the disease is one of the Nectria cankers, and a close relationship seems to exist between its appearance and that of the European beech scale. The tiny white cottony scale insect punctures the bark, after which the disease appears to enter and develop so rapidly as to kill the tree within a year or two.

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10,000 Replacements Ordered for Conservation Corps

Ten thousand additional young men between the ages of eighteen and twenty-five will be sent into the forest camps of the Civilian Conservation Corps early in August. They will replace men who have been dropped from the Corps or who have found other jobs. Selections will be made from all sections of the country.

At the same time it was announced by Robert Fechner, Director of Emergency Conservation Work, that on July 10 nearly 300,000 young men were actually at work in the forest camps. All conditioning camps were clear with the exception of a few occupied by war veterans and Indians. The final tabulation showed that of this number 256,000 were young civilians, 26,000 war veterans and 14,000 Indians. The number of forest work camps occupied by them was placed at 1,434.

During the last five days of the drive to have the full quota of 275,000 men in the work camps by July 1, the movement of men reached its highest peak. Men were moved into the forests at the rate of more than 10,000 a day, eclipsing by more than 3,000 the average daily rate of movement of men for the Army and Navy during the World War.

With the camps filled and actual forest work well under way, the magnitude of the work the civilian foresters will do has been announced. On the National Forests of the country they will construct 6,858 miles of telephone line, 15,287 miles of truck trails, 8,759 miles of horse trails, and 3,386 miles of fire breaks. They will erect fifty-four steel fire lookout towers, 281 fire observatories, and 1,890 buildings, including ranger and guard stations. These projects, with the clearing, for hazard reduction, of 381,500 acres of forests and the construction of twenty-three airplane landing fields, will complete the forest fire protection work the Corps will do.

Further activities call for the building of 3,298 miles of fence and 447 miles of driveway. They will establish 1,492 forest recreation camps and improve 1,011 others. Range

water improvement will involve 1,486 small projects. The men will reforest 86,750 acres and improve timber stands on 3,123,900 acres. They will engage in soil erosion work on 597,940 acres, insect control work on 672,000 acres, and blister rust control on 6,188,574 acres. On nearly 6,000,000 acres they will do rodent control work.

Similar work has been planned for state forests and parks and on projects on private lands.

In the National Parks forest fire protection will be furthered on 114,500 acres, insect control and tree diseases on 87,515 acres, and erosion control on 16,000 acres. More than 1,000 acres will be reforested, while 3,000 miles of roads and trails will be built. Twenty forest fire lookout towers will be erected.

On the Indian Reservations the work will be chiefly timber stand improvement and forest fire control.

In the western forests, where the fire season is reaching its peak, methods in fighting forest fires have been introduced to members of the Corps. Instructions are given by Forest Service officials. For this purpose the men are organized in groups of fifty each, headed by an experienced fire foreman.

In addition to the 300,000 members of the Corps engaged in forestry work, nearly 18,000 trained foresters, woodsmen and engineers have been employed as supervisors and foremen. Aside from these men, all camp assignments such as clerks, cooks, stewards, storekeepers, orderlies and guards have been made from the ranks of the Corps, these assignments averaging about eighteen to a camp.

An interesting phase of the demand for trained foresters for the Emergency Conservation Work was revealed by the Yale Forest School. Not one of the members of the senior class was present at the graduation exercises to receive the Master of Forestry Degree. The entire class had been called into service with the Corps. Their Degrees were conferred *in absentia*.

State Legislatures Pass Many Forest Acts

With the legislatures of forty-two states in session during the past few months, there has been produced a sheaf of laws comparable to some of the more far reaching federal acts. Many of the states have faced the economic pressure and seriously reduced appropriations for forestry and conservation, but the problems of land use and their solution through forestry were widely recognized.

Included in the acts affecting forestry are six which deal with the purchase of forest land for National Forests. Complimentary to the Tennessee Valley Project, Alabama and Tennessee now permit the purchase of land for National Forests within the Tennessee River drainage. Texas has broken a precedent covering her entire history to permit federally owned lands within her boundaries in the form of National Forests. Missouri amended an existing act, expanding the area of National Forests which can be acquired in a single county from 2,000 acres to 25,000 acres, and Wisconsin amended her enabling act so as to make unlimited the amount which can be purchased by the federal government. North Dakota opened the way for forest purchases in the Turtle Mountains and elsewhere.

Acquisition of forest lands by the states was encouraged by specific legislation in Florida, New Hampshire, South Carolina, Tennessee and West Virginia. New York amended

the existing act under which state lands are being acquired and Pennsylvania passed an act authorizing counties to acquire tax delinquent lands and organize them into county forests or turn the areas over to the State Department of Forests and Waters for administration as a State Forest.

West Virginia created a Conservation Commission for the State with a membership of five to be appointed by the Governor. This commission will administer lands, forests, game and natural scenic resources, together with all of the relief work made possible by Government grants and loans. It will create a state forest land fund and can borrow from the Government under the self-liquidating clause of the Emergency Relief and Construction Act of 1932, as now transferred to the Industrial Recovery Act.

Similarly, Florida, North Carolina, California and Washington have passed acts permitting the creation of limited dividend corporations for the administration and protection of forest areas with power to borrow from the Federal Government, and naming the State Forester or comparable officer as the agency responsible for administering the land while the loan is in effect. In Florida and North Carolina the dividends of preferred stock are limited to six per cent, while common stock may pay eight per cent.

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To take advantage of the opportunity to employ men on state and privately-owned lands under the Emergency Conservation Work and to meet the requirements of the Federal Government with regard to future profits from these lands, Tennessee, Texas and West Virginia have passed acts authorizing definite arrangements with the Federal Government, while New Hampshire has appropriated \$100,000 a year for the next two years for emergency relief work on her State Forests. Oregon has authorized the State Forester to prepare and assist in the administration of plans for forest management and protection on privately owned lands, and Alabama has authorized counties to borrow federal funds for forest and other purposes.

Montana has established a plan for the sale of timber from State lands. California has authorized the establishment of a State Forest Nursery to distribute forest planting stock to land owners within the State at cost.

Missouri has repealed all existing forestry laws and placed forestry under the Department of Agriculture. In Oklahoma the State Forester, who formerly served under a Forestry Commission, has been placed under the State Game and Fish Commission, and in Colorado he has been taken from the State Board of Agriculture and placed under the State Board of Land Commissioners.

Tennessee has liberalized the act under which the State Forester is employed so that he need no longer be technically trained but shall be a "practically trained forester of not less than two years' experience in forestry or allied work." The salary of the State Forester was reduced to \$3,000, of which the State will appropriate only \$1,800. The remainder may come from cooperative funds.

CONSERVATION CALENDAR IN CONGRESS

(Bills introduced from May 1 to June 15 not published in the July issue)

- S. 1889—WHEELER—To facilitate a more economical administration of forest and grazing lands on Indian reservations. To Committee on Indian Affairs June 10.
- S. 1888—WHEELER—To provide for protection and conservation of grazing resources of undisposed of ceded Indian lands, the tribal title to which remains unextinguished. To Committee on Indian Affairs June 10.
- S. 1890—WHEELER—To authorize the Secretary of Interior to grant concessions on reservoir sites and other lands in connection with Indian irrigation projects and to lease the lands in such reserves for agricultural, grazing, or other purposes. To Committee on Indian Affairs June 10.
- H. R. 5959—GLOVER—For the control of floods on the Mississippi River and its tributaries. To Committee on Flood Control June 7.
- S. 1855—McCARRAN—For the establishment, development, and administration of the Boulder Canyon National Reservation, and the development and administration of the Boulder Canyon Project Federal Reservation. To Committee on Public Lands and Surveys June 7.
- H. R. 6045—AYERS—To amend provisions of the Act entitled "An Act to extend the period of time during which final proof may be offered by homestead entrymen," approved May 13, 1932, to desert-land entrymen. Committee on Public Lands June 10.
- H. R. 5392—SANDERS—To amend the Patent Laws by taking out all reference to the Plant Patent Act of May 23, 1930. To Committee on Patents, May 2.

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ASSOCIATION URGES FOREST CONSERVATION UNDER INDUSTRIAL RECOVERY ACT

Declaring that the Industrial Recovery Act in giving the forest industries authority to control production obligates them to exercise that authority in a way that will guarantee to the American people the conservation of forest resources upon which permanent industry is dependent and from which public benefits flow in almost every channel of American life, the Board of Directors of The American Forestry Association meeting in New York on June 27 called upon the industry and the Government to recognize the principle of sustained yield forest management in effectuating the purposes of the act. The resolution passed by the Board setting forth its position is quoted in full below.

"The American Forestry Association is in hearty accord with the purpose of the Industrial Recovery Act to aid industry, to increase employment and wages, to curb destructive competition and to conserve natural resources upon which both industry and labor are so largely dependent.

"Among the major industries of the country the forest industry merits special consideration on the part of the Government and the public; not alone because of its importance to the commercial life of the nation, but because of the manifold public interests inherent in the land and forest resources with which it deals.

"It is common knowledge that American lumbering always has been and still is largely a process of destructive exploitation of forest resources. While serving the wood requirements of the nation with high mechanical skill, it has at the same time converted vast sections of our land into a public liability, thereby imposing upon communities and states the burdensome aftermath of exhausted resources, non-productive and tax delinquent lands, soil erosion and floods, loss of local industries and the drying up of individual opportunities for gainful employment.

"The fact that the forest lands of the United States constitute over one-third of the land surface of the country and exceed in area the total land area of France, Germany, Norway, Spain, and Italy emphasizes the importance of forest land treatment to the economic and social welfare of the nation. The further fact that over eighty per cent of these lands are in private ownership and that over ninety-five per cent of the destructive exploitation is taking place on private lands centers the problem in the forest industry.

"Because of the long time investments involved, forest practice that maintains the permanent productivity of the land is possible only by an industry that is financially sound and permanently prosperous in all its parts. For the past decade or more the forest industry has not been prosperous. Even before the depression chronic over-production and ruthless competition were steadily weakening its financial strength, destroying capital values, sapping working capital and limiting labor and wages. The depression has greatly intensified this situation.

"Burdened by these and other conditions beyond its control, many of which can be remedied only by public understanding and action, the industry as a whole failed to change forest practice in the woods or to reach an economic status leading to that end. It has in a sense become the victim of a system of private land ownership which by the imposition of heavy carrying charges on land and growing timber encourages rapid and destructive exploitation, the waste of forest re-

sources and the massing of tax delinquent and abandoned land.

"Public interest demands that the forest industry be dealt with in the light of the two-fold problem stated—economic stability and destructive exploitation of forest resources. Permanent solution of the former is dependent upon conversion practices that assure perpetuation of the industry's resource. Rehabilitation of the industry merely to continue destructive lumbering and the pyramiding of cut-over land would be a temporary palliative at best and one that will tend to aggravate and postpone ultimate solution of the nation's forest problem.

"The American Forestry Association views the Industrial Recovery Act as an unparalleled opportunity to begin rehabilitation of the forest industry along sound lines of economic stability, sustained yield management of resources and general public welfare. It believes that the authority given the industry to control production obligates it to exercise that authority in a way that will guarantee to the American people the conservation of the forest resources upon which permanent industry is dependent and from which public benefits flow in many diverse channels of American life.

"The Association, therefore, appeals to the forest industry to accept the opportunity offered and in the formulation of its code of practice under the Act to bring destructive lumbering under control as a corollary of production control and other measures of rehabilitation. It calls upon the Government through the Industrial Recovery Administration and the Secretary of Agriculture, whose department is best informed as to the forest situation, to recognize the principle of sustained yield forest management in effectuating the purposes of the Act, and to exercise such authority and to render such cooperation as may be necessary to achieve enforceable performance."

Following the meeting, George D. Pratt, President of the Association, mailed a copy of the resolution to Mr. John W. Blodgett, President of the National Lumber Manufacturers' Association, asking him to bring it to the attention of representatives of the forest industries which would gather in Chicago on June 30. Transmitting the resolution, Mr. Pratt expressed the hope that the Industrial Recovery Act may be the long sought instrument by which the industry, the public and the Government are brought together in a determined and constructive effort to solve the basic problems of the industry and the forest situation as a whole. He pledged the cooperation of The American Forestry Association in that effort.

Mr. Pratt also took occasion to emphasize the very great importance "in fact the necessity of public support and cooperation in permanently working out the industry's problem. It may well be questioned," he said, "if the industry will ever be in a position to demand public confidence and cooperation in the degree needed until its forest practices are based upon sound methods of sustained yield."

Wood Utilization Body Abolished

As an economy measure in the Department of Commerce, the National Committee on Wood Utilization was ordered abolished July 15. The committee was established in 1925 by direction of President Coolidge. Herbert Hoover was its first chairman. Axel H. Oxholm has served throughout as its director.

Conservation Work Slashed by Economy Program

With appropriations cut from forty to sixty per cent below expenditures in 1932, conservation activities by both the Federal and State Governments are suffering heavily. President Roosevelt, under special authority given him by Congress, has within the past few weeks pared about twenty-five per cent from existing appropriations, already reduced by Congressional and administrative action. As a result the Forest Service will have but \$11,361,857 for the year 1934-1935, as compared with \$19,996,145 in 1933. The National Park Service has been reduced sixty per cent, with \$3,939,600 for the coming year, while the Biological Survey has been reduced to \$995,461, or forty-

pensed with, and the work in California, the northern Rocky Mountain region, and possibly in the Lake States will be eliminated. At the same time the timber inventory in Mississippi, and in the naval stores region of Georgia and Florida will be curtailed. Highly trained personnel employed under the McNary-McSweeney Act are being separated from the Government,—some under the clause authorizing Federal employees who have served thirty years or more to be retired, but many younger scientific assistants must be dismissed or placed on indefinite furlough without pay.

Studies of the causes and means of controlling forest fires which furnish the basis for

SUMMARY OF CURRENTLY AVAILABLE FUNDS FOR CONSERVATION
COMPARED WITH APPROPRIATIONS FOR 1932 AND 1934

Appropriation and Sub-appropriation	Actual ex- penditures, 1932-1933	Appropriation, 1934-1935	Amount actually available for expenditure, 1934-1935	Amount of re- duction from 1932-1933	Percentage of reduction from 1932-1933
FOREST SERVICE					
General Administration	\$357,460	\$327,819	\$251,830	\$105,630	29.6
Fire prevention	100,000	100,000	100,000	—	—
Planting on National Forests	246,500	214,070	138,934	107,566	43.6
Sanitary and fire prevention facilities on public camp grounds	27,000	65,000	15,702	11,298	41.8
Improvements on National Forests	1,840,000	987,084	168,599	1,671,401	90.8
Acquisition of additional forest land	1,700,000	85,854	—	1,700,000	100.0
Clarke-McNary Law					
Forest fire cooperation	1,718,276	1,587,513	1,190,635	527,641	30.7
Cooperation — distribution of planting stock	79,960	74,730	56,047	23,913	40.9
McNary-McSweeney Law					
Forest management	544,000	492,671	378,468	165,532	30.4
Range investigation	126,000	100,000	76,820	49,180	39.0
Forest Products Laboratory					
Investigations	632,800	566,791	435,407	197,393	31.2
Laboratory	640,869	—	—	640,869	100.0
Forest survey	189,900	160,067	122,963	66,937	35.3
Forest economic studies	75,000	60,000	46,092	28,908	38.6
TOTAL	\$19,996,145	\$14,701,873	\$11,361,857	\$8,604,288	43.2
NATIONAL PARK					
SERVICE	\$9,960,379	\$5,252,790	\$3,939,600	\$6,020,779	60.0
BIOLOGICAL SURVEY	1,861,746	1,356,280	995,461	866,285	46.5
BUREAU OF FISHERIES	2,905,540	1,765,740	1,315,000	1,590,540	54.7
GRAND TOTAL	\$37,940,105	\$23,076,683	\$17,611,918	\$20,298,187	49.2

seven per cent. The Bureau of Fisheries, with \$1,315,000, suffers fifty-five per cent reduction.

Perhaps the heaviest blow will fall on forest products research and the new laboratory at Madison, Wisconsin. With limitations of \$435,000 as compared with the authorized appropriation of nearly \$567,000 for the current year, many cooperative projects must be dropped and the building with its equipment may suffer because of insufficient operating funds. The administration faces the possibility of dropping forty employees, and giving up such important projects as the study to develop means of using southern and western woods for paper pulp.

Because funds available to the forest survey are reduced from \$160,000 to \$123,000, about twenty-five temporary field men must be dis-

locating roads and lookout towers, whose construction promises to be a public works project on National Forests, will be hampered. Likewise, successful planting of abandoned and eroded lands in the central States and in the Prairie region, and the improvement of stands of timber by thinning out undesirable trees, both of which form part of the Emergency Conservation Work Program on National Forests, may be retarded.

With funds for cooperation in controlling forest fires under the Clarke-McNary Act reduced over thirty per cent since 1932, a heavy burden falls upon the taxation and insurance studies, while over half a million dollars has been taken from the money available for the several states. If the difference cannot be made up from state or private sources there



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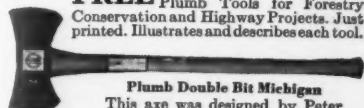


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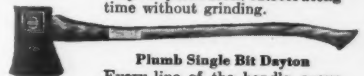
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may follow serious losses from fires unless protection is provided by the men of the Civilian Conservation Corps. There is a question, however, as to whether these men can be used to make up for reduced protection activities on the Public Domain, caused by the total elimination of the established item of \$60,000.

While reduced from nearly \$13,000,000 in 1932-33 to less than \$4,000,000 for the present year, the National Park Service will not need to dismiss any but temporary employees. A large portion of their reduction is taken from funds for constructing roads and trails, but with \$16,000,000 allocated from the road building fund of the National Recovery Act, a satisfactory program is assured for the next two years. An additional \$1,250,000 has been allotted for buildings, water systems and telephone construction on National Parks.

Losing more than \$360,000 from the current year's appropriation, the Biological Survey has less than a million dollars to carry on work which cost nearly \$2,230,000 in 1932. This heavy reduction makes necessary the separation of about 200 employees through indefinite furlough or retirement. These include three out of the twenty-five United States Game Protectors, five Reservation Wardens, and more than 150 who were connected with the control of predatory animals and rodents. Included among those who are retired because of thirty years or more of service are Vernon Bailey, field naturalist of national reputation, and Dr. T. S. Palmer, in charge of regulations covering the importation of birds and mammals.

The Bureau of Fisheries is correspondingly hard hit with only \$1,315,000 available as compared with an appropriation of \$1,765,740 for the current year and \$2,905,540 for 1932. Fish hatchery operations will be so heavily reduced as to force the Bureau to revert to the obsolete method of stocking streams and lakes with helpless fry rather than with fingerling fish four or five inches in length. The usual use of considerable numbers of temporary help in carrying on the heavy burden of summer work must be dispensed with, and a number of scientists will be dismissed.

Compensating to a limited extent for the retrenchments, however, are increased activities authorized under the Emergency Conservation Work, the Tennessee Valley Project, and the expanded programs of a few states. With twenty million dollars available for the purchase of forest lands in the eastern States and fifty million dollars authorized in the National Recovery Act for building roads and trails on National Forests, National Parks, and Indian Reservations, together with the strong possibility that other funds may be available from the Public Works funds of that Act, for improvements, white pine blister rust control, and other activities, while privately owned timber lands may be placed under regulation as a part of the code of fair competition for the lumber industry, there is reason to hope that some of the slack involved in reductions for land acquisition, improvements, and forest planting will be taken up. Meanwhile no emergency appropriation has been made available for expanding the work of research.

In addition to the sixteen million dollars allotted to the National Park Service for roads and trails, from the special fund of fifty million dollars in the National Recovery Act, the Forest Service will receive fifteen million dollars for forest highways and ten million dollars for forest development roads; four million dollars will go to the Indian Service for roads upon whose construction only Indian labor will be employed, and five million dollars for roads on the Public Lands.

BOOK REVIEWS

THE PLANT WORLD IN FLORIDA, by Dr. Henry Nehrling. Published by The Macmillan Company, New York City. 304 pages, illustrated. Price \$3.50.

Those interested in tropical and subtropical horticulture — in fact, all Southern plant growth, will hail this book with enthusiasm. A careful piece of work, it was collected and edited by Alfred and Elizabeth Kay from the voluminous records of the work of Dr. Nehrling, kept with exhaustive thoroughness over a period of forty three years, during which he built two great gardens in Florida. The book treats of shade trees, palms, flowering shrubs, orchids, bamboos, and bulbous and tuberous-rooted plants. This great naturalist made meticulous record of growth, describing propagation methods and developing uses. The book is a valuable and authentic source of information to tropical garden makers.—L. M. C.

A'HUNTING WE WILL GO, by Brigadier Geoffrey Brooke. Published by Lippincott. 351 Pages—Illustrated. Price, \$3.00.

This new hunting romance by Geoffrey Brooke is a sporting novel of the best kind. The author is well versed in human as in horse nature, and he tells his story quietly, and with more occasional sallies into hilarious good humor than most. He gives us a fine account of runs after hounds, told with all the zest of the hunting pace. The colored frontispiece and the black and white illustrations by Captain G. H. Dixon add enormously to the book.—E. K.

BIRDS YOU SHOULD KNOW, by Thornton W. Burgess. Little, Brown & Company, Boston. 256 pages, illustrated in color.

This splendid little guide book—built in size to be easily carried in the pocket or even hand-bag—is essentially for use in the field, and for the novice in bird study. Compact, clearly printed and beautifully illustrated in color with authentic reproductions of Louis Agassiz Fuertes' plates, it will be found an aid to prompt and positive identification of the common land birds as well as some of the rarer species, and includes also a few of the shore and water birds found east of the Mississippi. Brief, accurate, and interesting, this little book fits, and well rates, a place on your shelf of "guides."—L. M. C.

LIFE HISTORIES OF NORTH AMERICAN GALLINACEOUS BIRDS, by Arthur Cleveland Bent. Smithsonian Institution Bulletin 162. 477 pages—Illustrated. Government Printing Office, Washington, D. C. Price \$1.00.

This publication, of the *Bulletin* series of the National Museum, is of great value as a reference work, covering as it does in the most authentic manner the complete history and description of the orders *galliformes* and *columbiformes* of our North American gallinaceous birds. The text is supplemented by a collection of ninety-three half-tones, made from photographic plates of very great interest.—L. M. C.

AMONG THE CURRENT PUBLICATIONS

A Forest Policy and Program for Mississippi, prepared by Fred B. Merrill, State Forester, for The State Forestry Commission, Jackson, Mississippi. Premises and recommendations for enacting a forest policy that will make possible a continuation of Mississippi's greatest manufacturing industry, which is the wood-using industry.

State Distribution of Returns From Banded Ducks, First and Second Papers, by Frederick C. Lincoln. Reprinted from "Bird-Banding." A series of papers to acquaint students of birds, sportsmen, conservation officials and others with information relative to the dispersal of our migratory waterfowl from points of concentration.

Insulation on the Farm, by Russell E. Backstrom, published by National Committee on Wood Utilization, United States Department of Commerce. For sale by the Superintendent of Documents, Washington, D. C. Price, ten cents. A companion to an earlier publication from the same source entitled "House Insulation, Its Economics and Application." This publication is designed to help farmers select and apply desirable insulating materials in designing and erecting farm structures. Because many of the materials are of wood or wood products the application of the information should encourage lumber production.

State Land—Settlement Problems and Policies in the United States, by W. A. Hartman. Technical Bulletin No. 357, United States Department of Agriculture. For sale by the Superintendent of Documents, Washington, D. C. Price, ten cents. Economic changes which have reduced the necessary crop land to supply the needs of this country by at least 50,000,000 acres since the World War, the reversion of large areas of land to public ownership because of tax delinquency are among the factors contributing to the need of new land policies. Summaries of the Federal land laws and of the several state experiments in land settlement are presented and in conclusion the need for sound land-use planning programs is emphasized.

Report of the National Research Council for 1931-1932, Reprinted from the Annual Report of the National Academy of Sciences. The report is divided so as to present the activities of the several divisions and committees. Under the division of biology and agriculture is a progress report on the bibliography of North American Forestry being prepared by the United States Forest Service in cooperation with the Southern Pine Association and the Research Council. Also a statement emphasizing the need of special training to equip men for caring for the wild-life resources.

The Public Domain of Nevada, and Factors Affecting Its Use, by E. O. Wooton. Technical Publication No. 301, United States Department of Agriculture. For sale by the Superintendent of Documents, Washington, D. C., price, seventy-five cents. Supported by two large maps of Nevada, folded into the body of the bulletin, is a description of the problems confronting the State with the greatest acreage of public land. This brings into the forefront the question as to whether the lands should be maintained as open range or under some form of control.

Northeastern Forest Experiment Station Completes Ten Years

With 4,000 acres of forest land under intensive study within the Gale River and Bartlett Experimental Forests, in the White Mountain National Forest, and tentative agreements for similar use of some 600 acres in New York State, the Northeastern Forest Experiment Station, under the direction of C. Edward Behre, reports the completion of ten years of study and service.

Outstanding among the accomplishments of this decade is the recognition of a definite relationship between weather and inflammability of forest soils and periodic predictions of forest fire-weather as worked out in cooperation with the Weather Bureau and several agencies of the region.

Other studies which have resulted in material savings to forest owners show the importance of growing white pine in mixture with other trees in order to reduce the damage from white pine weevil, and the conclusion that the natural decay of hardwood slash is sufficiently rapid to make further expenditures for its disposal unnecessary.

The normal yield tables of even-aged stands of spruce and fir completed by W. H. Meyer in 1926 have become standard for the region, and silvicultural studies have demonstrated the effectiveness of girdling cull hardwoods as a means of increasing pulpwood yields of spruce.

Evidence of the practical value of the Station's work is shown by the complete elimination from New England of European larch canker, which had established itself in plantations of Douglas fir. Had it continued in this country, the disease threatened the existence of the extensive Douglas fir forests of the West.

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ARE STUMPAGE VALUES VANISHING?

(Continued from page 355)

of distress selling in recent years which has lowered average prices. The necessity of forced sellings is not peculiar to the owners of standing timber and producers of logs, but must be faced by owners and holders of all forms of property.

The fact remains that standing timber is not as perishable as are the more common agricultural products which usually must be harvested and sold very promptly. On the contrary the owner of standing timber can, under ordinary conditions, afford to wait until marketing conditions improve. This is one of the favorable characteristics of timber as a crop and should receive the careful consideration of those having timber to dispose of. Logs, on the other hand, represent the first step in the conversion of standing timber into manufactured products. When once trees are felled and sawed into logs, the owner must dispose of them within a relatively short time to avoid depreciation. As far as general price levels are concerned, it would have been no less fallacious to assume, several years ago, that post-war peak prices would continue indefinitely than it is now to assume that the present low prices will continue indefinitely.

If the foregoing data help to lay the ghost theory of vanishing stumpage prices, they will serve a highly useful purpose. Our forest and land problems will not be solved by the psychology of fear or ungrounded beliefs that trees have lost their intrinsic worth. True, stumpage and log prices have decreased in recent years. Timber values, however, although diminished since the peak of 1928-1929, are still far from vanishing. On the contrary, woodland well stocked with merchantable trees has held its value in recent years better than other farm products. The greater stability of stumpage and log prices when compared with the price stability of other products of land augurs well for the future of forestry and is of special interest and importance in view of reforestation measures now being prosecuted or which have been recommended by the Federal administration.

HATTERAS CHANNEL BASS

(Continued from page 361)

Sunday and we would be jinxed. Sure enough, we caught no channel bass, but brought in a catch of bluefish, trout, kingfish, rays, sharks, and the plentiful ocean catfish. We used lots of bait and got lots of action, but no channel bass.

Supper call came, and we returned to the station with our catch. The Captain good-naturedly kidded us about our "jinx" and we decided to try and break it. After supper we fed the live wild geese domesticated for decoys, and swapped yarns. The time passed quickly.

Again daylight found us on the beach. The sea was quiet, and after fishing without success until noon, we returned to the station, giving up channel bass fishing as a bad job. After lunch I decided to get fresh mullet for bait, while Bill and John sought corned mullet in Morehead City. On their return, they decided they would not fish until the next day, so after supper I went down to the beach to try my luck. The moon found me alone in the surf awaiting goodness knows what. I hoped for a drum, but the conditions were not right. While I thought things over, I had a heavy strike, and the "something" that had hooked itself started to sea at a fast clip. At first I thought it was a bass and a heavy one, but

when it finally stopped, sounded and shook its head, I knew I was wrong.

We fought it out, up and down the beach in the moonlight. Finally I succeeded in drawing my prize ashore and discovered it to be a shark of over four feet in length. I made a grab for the plume on his tail, and started to drag him up the beach to the high water mark. This maneuver nearly resulted in the loss of two bare toes as the shark, resenting his ignominious end, turned on me like a cat. Fortunately, I moved just in time. It taught me a lesson, and I dragged him up the beach by the leader.

A confirmed optimist, I baited up and returned to the surf for still another try at the channel bass. Again I had a heavy strike and a lively battle. It was another shark, the twin brother of the one I had just landed. By this time it was very late, so I gave up the fishing reluctantly and returned to the station to find all hands, except the watch, asleep. I turned in quietly.

The following morning, Captain and Mrs. Baum accompanied us to the beach. The ocean was full of sea-weed, which made fishing hard. It weighed down our lines and clogged our reels. We had poor luck until noon, when John and Bill started down the beach. They found a good "slew" and caught six or eight shark and trout. I continued to fish where I was, and finally landed some ocean catfish. They are known to the seamen as "Top Gallantsail Fish," due to the long dorsal fin. We used them for bait. Their back is a deep blue and their sides and belly silver. The meat is quite red, not unlike salmon. When I joined John and Bill, the run was over, so we amused ourselves by dissecting the sharks to see what made them "tick."

Convinced that our "jinx" was real, we decided to leave the next day and after a reluctant "good-bye," we headed for home. We had a hot trip, but what is that to fishermen!

Woolsey, Soldier-Forester, Takes Own Life

Colonel Theodore Salisbury Woolsey, internationally known forestry expert, shot himself to death at New Haven, Connecticut, on July 10.

Colonel Woolsey, who was cited by General John J. Pershing for his services during the World War and honored by three European governments for his forestry work, was found dead in his bedroom. It was said that he had been depressed by illness in his family.

Born in New Haven in 1879, he was the author of several books on forestry. Prominent among them were "American Forest Regulations," "Studies in French Forestry," and "Riding the Chuck Line." He became associated with the United States Forest Service as a student assistant in 1900, resigning in 1915 as an assistant district forester to become a lecturer at the Yale School of Forestry. Most of his work for the Forest Service was in the West. Later Colonel Woolsey made studies of the forestry movement in India, Austria, France, Germany, Algeria, and Corsica.

In 1917 he was appointed assistant professor at the Yale Forestry School, but instead of joining the faculty entered the United States Army with the rank of major. Later he was promoted to lieutenant colonel of Engineers and was attached to the Paris headquarters staff. During 1917 to 1919 he was the American delegate of the Interallied War Wood Commission.

Colonel Woolsey was awarded the D. S. O. by England. He was a chevalier in the Legion of Honor of France and in the Order of Leopold of Belgium.

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Ask the Forester?

Forestry Questions Submitted to The American Forestry Association, 1727 K St., N. W., Washington, D. C., Will be Answered in this Column. A Self-Addressed Stamped Envelope Accompanying Your Letter will Assure a Reply.

QUESTION: Could you advise what would prevent a return of the canker worm (about an inch long measuring worm type) which has been so destructive in Nassau County this spring?—G. F. W., New York.

ANSWER: The measuring worm, or looper attack, has extended beyond New York into parts of Pennsylvania, where hickories, wild cherries, and a few fruit trees were defoliated. Fortunately, many of our native birds feed on the worms. To attempt to control the worm in the forest would be too expensive. Shade trees can be protected by banding the tree trunk with a sticky material such as is used on fly paper. Strips of fly paper may be used and the space between the paper and the park crevices filled with cotton. This will prevent the wingless females from crawling up the tree to deposit their eggs. Bands should be put on late in the fall, kept fresh until winter, and reestablished for a few weeks in the early spring. Spraying with five pounds of arsenate of lead to fifty gallons of water in the spring or early summer will also prove effective.

QUESTION: The leaves on my basswood trees are covered with little wart like growths. Will they kill the tree, and is there any way of control?—M. C., Virginia.

ANSWER: This is probably the Linden mite gall (*Ariophyes abnormis*). The galls are caused by small winged insects. When they lay their eggs on the leaves they sting the surface so as to cause the leaf to surround the eggs with a fleshy growth. They do no serious damage to the tree but are exceedingly disfiguring. The Department of Agriculture recommends that these galls can be controlled by spraying the trees early in April with lime sulphur at the rate of one pint of the standard solution to a gallon of water. This discolors paint and should not be used near buildings.

QUESTION: What type of tree is used for planting in fire-breaks? This particular tree is supposed to be indestructible by fire. Could it be grown in the southern part of California, in the foothills region away from the coast?—J. R. F., California.

ANSWER: According to the United States Forest Service this is the Oregon Alder (*Alnus rubra*), a broadleaved tree which grows on moist ground and occasionally attains heights of 80 to 100 feet. It is being planted experimentally in fire-breaks, in plantations of Douglas fir, Sitka spruce, and other coniferous trees on the West side of the Cascade Mountains in Washington and Oregon. It has not been adopted as a part of standard practice. Theoretically it should serve as a fire-break during the first fifty or seventy-five years of the life of the plantations but has not

been used long enough to prove its worth. Oregon alder demands abundant moisture in the ground and is not likely to be satisfactory in the foothills of Southern California. Plantations of forest trees in that region can be better protected by felling snags and opening wide fire breaks.

QUESTION: Please give the botanical name and some information regarding Franklin's tree which was found in Georgia during the later part of the eighteenth century—F. E. H., Georgia.

ANSWER: This is *Gordonia alataamaha* as described in Bailey's "Cyclopedia of Horticulture," and *Franklinia alataamaha* in Standardized Plant Names. Although discovered in Georgia in 1790, and now propagated to a limited extent, no wild specimens have been found since the original report. Charles F. Jenkins, in the *Pennsylvania Magazine of History and Biography* for July, 1933, describes the tree in "The Historical Background of Franklin's Tree."

QUESTION: What is the technical name of the Fan Palm which grows at Furnace Creek Ranch in Death Valley, and in Palm Canyon, California?—W. T., New York.

ANSWER: This is *Washingtonia filifera*, the only native palm growing in California and the Southwest. It is described in Jepson's "Manual of the Flowering Plants of California" published by the University of California Press at Berkeley, California.

QUESTION: Please group the employed workers in the C. C. C. camps, according to salaries paid and work done.—A. R. B., Maryland.

ANSWER: Recent press releases carry the information that 19,642 civilians will direct the forestry and technical activities of the C. C. C. and will be paid salaries ranging from \$102 to \$255 per month. The average salary is about \$130 per month, from which a subsistence fee of from \$15 to \$30 is subtracted. About thirteen civilian workers, including foresters, landscape specialists and engineers are attached to each camp of 200 men enrolled at \$30 a month. In addition, the regular employees of the Forest Service, National Park Service and Indian Service will give such time as they can spare for direction of the work.

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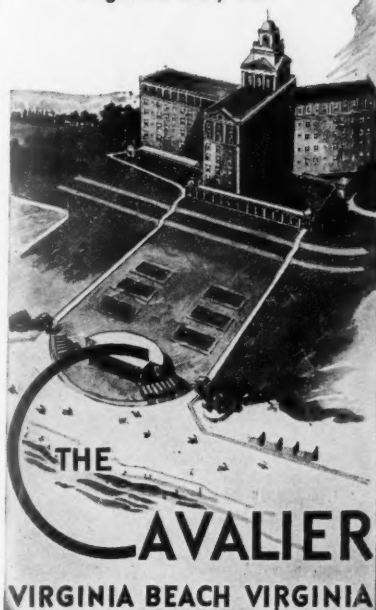


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FOREST PAGE FOR BOYS AND GIRLS

(Continued from page 367)

fact! Fish cannot hear; but my! how they can feel! They are remarkably sensitive to vibrations. The wary fisherman, therefore, guards against superfluous movements, especially if he is fishing from an overhanging bank. And if he is fishing from a boat, he guards against the careless dropping of objects to the floor, or the absent-minded scraping of the paddle against the sides of the boat.

"Although ordinary sounds originating above water are deflected rather than transmitted into it, water is a ready conductor and a delicate register. Submerge your head, and you will find it impossible to hear ordinary noises originating above the surface, but let someone hit two rocks together under water while you are in the same position, and the sound not only travels readily for a considerable distance, but seems to be multiplied. Indians have been known to resort to such a method of communication when circumstances necessitate secrecy and no other method was available. Water is a marvellously delicate instrument.

"Winds exert an almost incalculable effect on the feeding habits and activities of fish. It is almost axiomatic among fishermen that an east wind, for instance, is the most adverse possible, while west, northwest, and south winds are almost universally regarded as favorable omens. Experienced commercial guides stubbornly refuse to take out fishing parties against an east wind, so strong is their conviction on this point.

"Why is an east wind unfavorable to fishing? This is an interesting subject of speculation about. Frankly, I do not know the answer, and I have never met a meteorologist or an ichthyologist who could explain the phenomenon to my satisfaction. The best we can do is to conjecture.

"Winds naturally affect fishing by affecting weather conditions. They are both weather signals and weather breeders, serving in a double capacity of cause and effect. East winds are frequently the harbinger of a protracted rainy season:

'Rain from the East,
Two days at least.'

A meteorologist in the service of the United States Weather Bureau recently offered me a rather ingenious explanation of this wind and fishing business. An east wind is bad for fishing, he suggested, because it disrupts the water relatively more than any other, blowing against the direction in which the earth is rotating, while a west wind, blowing with the rotating earth, disrupts water least.

"It is a fact, however, that west winds are normally the forerunners of dry air and clear weather. They mean high atmospheric pressure and an exhilaration of animal spirits. Perhaps that is why they are traditionally celebrated in song and story. An east wind, on the contrary, means decreasing pressure and increasing humidity. Many members of the animal kingdom are visibly affected by changes of pressure and humidity. Generally speaking, low pressure, low spirits; high pressure, high spirits. It would seem fair to presume that fish are somewhat similarly affected. South winds are favorable to fishing because they are balmy, whereas winds from the North often inaugurate a period of cold weather. Whatever affects the temperature of water affects the feeding habits of fish. A protracted cold rain, therefore,

has a more noticeable effect than an April shower, which seems to revivify animal and vegetable life alike.

"The sum and substance of my observation is: don't go fishing when a major change is brewing, and if the change has affected the temperature of the water, allow a day or so for the fish to 'get used' to the change, or the water to become normal. Whatever you do, avoid the 'turn' of the weather. And if you have your choice of winds, pick those from the South, West, or Northwest. And keep a weather eye on the fish in your own aquarium. Their behavior is a surprisingly reliable index, although they are living under artificial conditions. Watch their conduct just preceding a storm. A neighbor of mine regularly consults his goldfish before going on a fishing trip.

"Lunar observation is the basis of many fish calendars. Personally, I have a strong predilection for a dark moon, but many insist that the week preceding the full moon is equally as good. There is one fact I have established to my own satisfaction: for night fishing, the blacker the night, the better, especially for non-game fishes. Catfish, for instance, circulate more freely and feed more actively on a dark night than a bright one. A lover of the dismal depths, he circulates nearer the top on a black night or when the water is muddy.

"Many fish, such as the bass and perch varieties, prefer to bed on the full of the moon. Some species, such as the bass, show little disposition to bite while bedding, although they will seek to eliminate a menace or repel an invader, and may therefore be goaded into snapping at a lure. Their disinclination to bite while bedding is a providential arrangement, since many states have no closed season on bass whatever. So the various popular notions regarding 'moon fishing' may have a minimum of fact behind them. Indeed, science is conceiving a new respect for many superstitions. Recent disclosures and experiments tend to prove that such a superstition as 'planting with the moon,' for instance, is not without some scientific basis.

"After all, there is nothing very singular about the ability of fish to foretell weather conditions. It is a trait they possess in common with many animals. The possession of such weather consciousness is certainly no more extraordinary than the unerring homing instincts of such animals as cats and dogs; or that uncatalogued sixth sense which 'guides through the boundless sky thy certain flight' of the waterfowl, or of the golden plover, which annually 'commutes' from the Arctic circle to the southernmost tip of South America, making the trip, it is believed, in one sustained flight.

"This business of predicting whether fish are going to bite should be taken with curiosity. It is manifestly impossible to forecast successfully on such a matter over a large territory, because local conditions may offset general conditions, and because of the great variety of fish and the diversity of their feeding habits. The best that one can reasonably hope for is to acquire a fair competence as a 'piscatorial prognosticator' for his favorite stream or lake.

"Anyway, as a friend of mine insists, the thing to do is to go fishing 'whether or not,' for it's always fair weather when good fishermen get together. And it is the very uncertainty of this fishing business that makes it so alluring.

THE MORNING MAIL

Selected Comments From The Association's Post Bag

"We of the forests sure are proud of the great advances forestry has been making the last few years, and your great American Forestry Association can be thanked for most of it. Keep the good work up and please send me a copy of your latest issue."—**Matt, the Lumberjack**—**MATT STAPLETON**, Milwaukee, Wisconsin.

"I have been taking this magazine (AMERICAN FORESTS) for four years, and this year I am being given it by my father for my ninth birthday. I wanted it more than anything else, so my father gave it to me."—**SNOWDEN TAYLOR**, Long Island, New York.

"I have greatly regretted my inability to continue my subscription until now. The companionship of the trees, through a very difficult year, has brought constant comfort and pleasure—and I have appreciated particularly receiving AMERICAN FORESTS. This is the only subscription I am able to continue. Best possible wishes for increasing support of The American Forestry Association!"—**MARGARET N. BURNHAM**, Raymond, Maine.

"Your magazine has given me great pleasure—is a gem in many ways—especially from an educational viewpoint. Will you kindly send me full details regarding your Contest for Most Beautiful Trees."—**M. C. BACON**, Fresno, California.

"AMERICAN FORESTS for July is alive with interest, high in social value and beautifully illustrated. I am proud of this achievement of our Association and congratulate the editorial staff.

"Ringland's article on Italy's conservation program is the most inspiring portrayal of practical objectives in conservation that I have ever read. For nearly two decades we have suffered spiritual shock from war, greed and hate and I, for one, am uplifted by a vision of what can be accomplished when man turns from destruction to construction. 'Reclaim the land, and with the land the men, and with the men the race'."—**S. B. DETWILER**, Clarendon, Virginia.

"Having seen your reproduction of my picture, 'The Country Road' this morning, would say that I am more than pleased with your handling of this subject. The softness of the large trees, and the pleasing effect of the light and shadows make your work outstanding."—**Dr. J. WILLIAM HELD**, Freeport, Pennsylvania.

"I have just received a copy of the resolution adopted by your Board of Directors on the application of the Industrial Recovery Act to the forest industries and of your letter to Mr. John Blodgett.

"Both the resolution and the letter, in my opinion, are admirably done and will have a marked influence on the industry, on the Government, and on the public. This action seems to me to be of incalculable importance and in thorough keeping with the fine tradition of The American Forestry Association.

"Will you please accept from me, as a member of the Association and a co-worker in forestry my warmest congratulations and my

best wishes for the continued power and success of the Association?"—**WARD SHEPARD**, Washington, D. C.

"I always was delighted in seeing each month's copy of AMERICAN FORESTS, but for some time, now, have not seen the magazine. I trust you are still getting it out, particularly as our new Administration is giving forests fine publicity. You were covering a big field with forest leaves!"—**WILLIAM B. ASHLEY**, Tuckahoe, New York.

"Prairie bred, and never having seen a forest until I was nineteen, I have a reverent love for the great woods that is almost a passion. Needless to say, AMERICAN FORESTS is my favorite of magazines and I would rather wait any length of time for my copy to appear in it than to get immediate action from any other magazine."—**GLADYS BRADSHAW PERRY**, East Lansing, Michigan.

"Arthur Ringland's 'Mussolini's Sybarites' is one of the finest stories AMERICAN FORESTS has ever published. It gave me a clear understanding of land utilization. I admire his vision. Give us more of this sort of thing."—**H. A. WARREN**, Jacksonville, Florida.

"I do not know who drew your resolution of June 27 (appearing on page 372), but it was the fairest and most comprehensive thing of its kind that ever emanated from a civic association."—**JOHN W. BLODGETT**, former president of the National Lumber Manufacturers Association, Grand Rapids, Michigan.

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"REMEMBERED MEN"

(Continued from page 352)

of eight days, sandwiched in here and there. In the forest he is an indispensable part of the dispensary for sick call. He is rough, but he is thorough.

Another chap had been a mighty good shipping clerk. He worked for several years. One day the efficiency department noted that they no longer were shipping so many things. They cut off several clerks. He laughed. He knew he could get work. He clerked in a drug store at nights for a few dollars a week. He lost this job. His family was worried. Months slipped past but he never gave up trying. For weeks he would sell neckties, sell suits, sell anything. Sales were few and commissions were lean.

Today he is in charge of supplies in a Civilian Conservation Corps camp. He is competent. He grins broadly. He has found the kind of work he wanted. "It's only thirty bucks a month, but it's eats, a place to sleep, an' clothes," he will tell you. "That's pretty good. In fact, that's a job!"

The rise and fall of the "napping" hammers in forest road work is rhythm that kills unless you are accustomed to it. But one chap thrives on it. He is burned a deep brown. His muscles swirl as he swings his eight-pound hammer all day with no apparent effort.

He was a member of a survey party not more than a few months ago. He spent long hours walking through forests and over uneven terrain. He liked to work. The engineers disbanded and he trudged the streets peddling brushes, soap and silk stockings. He tried day after day. He became thin. His clothing became ragged. He slept in a box beside a furnace. He coughed heavily.

Today he is admittedly the most efficient worker in his line in the forests. He swings his hammer easily. He swings it all day. And he grins every evening as he leaps from the truck that brings him back to his post. Some day, he says, there will be other engineering crews, and his own work.

There is a former government employee who

worked for several years in offices. He liked the work. One day he bought a small car. It was the apple of his eye. Two weeks later he was searching for a new job. They were "cutting down," he said. His resources dwindled. The car went for food and clothing. He sold magazines from house to house all last winter. It paid for food and helped keep his brothers and sisters.

He enrolled for forest work, and left home happy. His family could live on \$25 a month and rent paid by the relief agency. He is a truck driver now. He toots his horn and rounds the tortuous mountain curves carefully. He likes his new job better every day and believes that it will qualify him for a "good job" in the fall.

Another youngster's father was dead. For almost two years he had no work. In fact, he had worked but three years in all his life. And he didn't much care. One morning while he was lying in bed his mother called him. He groaned and arose, dressing slowly. There was someone to see him, his mother called, so he dragged down the stairs. His eyes were heavy with sleep, and lacked the lustre of living.

They wanted him to go to a forest work camp. He didn't want to go. His mother insisted. He looked at her. She was crying. He wandered for days about the forest camp to which he had been assigned. He knew his family was being taken care of and that he was to work. He blinked his eyes every time he thought of it. Weeks passed. His eyes sparkle. His words fairly snap. He is brown as a berry, and anxious for a chance to get home to see his mother. He writes every week.

"This is the first time I have lived, really," he will tell you, "and I like it more every day."

These men are not exceptions to the rule. They are selected examples of the work being done in building men and forests. They are living examples of the faith President Roosevelt has in American boys.

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August, 1933

KEEPING NATURE'S BALANCE ON THE WESTERN RANGE

(Continued from page 345)

be an annual contribution to the soil in order to maintain the proper mulch cover for nature's balance. This contribution increases plant food; therefore, it increases plant growth which forms a physical hindrance to the flow of surface water.

In August of 1930 I observed a heavy rain storm in the dry farm wheat area of southern Idaho. The wheat was practically ripe but none had been harvested. About one half of the cultivated areas was in fallow, the other half in crop. The crop lands and fallow lands were in pieces of forty to eighty acres or more, and about equally distributed over the entire area. The gradient and type of soil seemed comparable.

The fallow lands showed great damage from erosion. Thousands of small ditches and destructive gullies from a foot to thirty feet in width had been cut through the plowed ground, but not a single gully was observed in the growing wheat. Cases were observed where streams had cut wide gullies in the plowed land and had entered fields of growing wheat, with the result that the wash soil was mostly deposited on the upper edge of the wheat field and the stream had been so retarded and spread out that gullying had ceased and no erosion damage was found. Similar observations have been noted.

W. P. Rockie and P. C. McGrew in "Erosive Effects of Heavy Summer Rains in South-eastern Washington," observed that:

"It mattered not what the vegetative cover was, how steep the slope might be, or how much momentum the flood had been given by a long slope of summer fallow above, the erosion stopped in almost all instances at the point where vegetation occurred.

It should be remembered that when the gradient is constant the velocity of the running water will vary with the volume. The carrying power of the water varies approximately as a sixth power of the velocity. The erosive power of water with high velocity was demonstrated in floods in two canyons in northern Utah. The canyons were located similarly on the west face of the Wasatch Mountains and were approximately the same size and with a comparable watershed area and gradient. The land in one of the canyons was purchased years ago by a municipality in order to prevent excessive grazing and protect the water for culinary use. The other canyon was owned privately and excessively grazed. Large patches of oak brush had been burned with the idea of making better browse and much of the upper area had been over-grazed.

A heavy rain occurred in the head of these canyons. While the water was not measured, it was estimated by a trained engineer that approximately the same amount came out of each canyon. In one the water came out in about eight hours while in the other thirty hours were required. The stream which flowed to the valley in thirty hours did no appreciable damage. The one which flowed out in eight hours brought with it thousands of tons of rock and soil debris, many of the rocks weighing ten tons or more. Homes were destroyed, highways were covered, railroad tracks were washed out.

One naturally asks if floods had previously occurred in this area. Records in the community, which was established in 1860, failed to reveal previous damage from floods.

A study of the upper grazed area showed that the beginning of gullying and the quick run-off from the devegetated area developed a stream of such size as to wash away fifty feet or more of debris. This filled the canyon which had been hundreds of years in forming.

The question has often been raised as to whether the water-absorbing capacity of soil increases or decreases with the removal of vegetative cover. Recent experiments seem to indicate that the absorbing capacity of soil is increased when the cover is burned or removed. Others indicate that absorbing power is decreased. Both are right. It depends on the soil or the soil type and, to some degree, on the gradient.

About thirty years ago the towns on the west side of the Wasatch plateau were in constant terror of damaging floods. Thousands of dollars were spent to control the streams. Everyone knew that the watershed had been seriously overgrazed, that the range in large areas had been converted into a dusty surface. When the United States Forest Service assumed supervision of the section the area was revegetated and there have been no floods during recent years. Deep gorges have refilled with silt and normal erosion established.

In most cases the removal of an unusual amount of debris is not the result of disintegration of residual material but the disturbing of deposited soil and debris after stability has once been established. Examples of this are plentiful in southern Utah and northern Arizona. Flat narrow valleys have filled in and become vegetated with grass, sage, and other valuable browse. They have established a balance over hundreds of years which would remain if the vegetative cover were left undisturbed. Once disturbed, the balance no longer exists and accumulated floods from devegetated slopes of higher gradient turn the valleys into gorges in a remarkably short time.

It can be definitely measured that where deep gullies and gorge-like rejuvenated valleys with destructive streams are found, the watersheds on these areas have been disturbed and readjusted from the time when the sediments became stabilized to form the flat bottom.

On a lightly grazed mountain north of Salt Lake City destructive gullying has developed in recent years. The reason lies in a heavy growth of June grass (*Bromus tectorum*) which becomes ripe and dry early in the summer. This grass has accidentally caught fire and the whole mountain burned over several times. This burning destroyed natural balance and accelerated the process of erosion.

The erosion problem on the western range lands should not be looked upon as a threat but as a problem to be studied and solved. It does not mean that grazing cannot continue but that it should be done with system and conservation. All that man can do will not greatly influence normal erosion. Abnormal erosion, however, can be prevented.

It has been interpreted that increased interest in erosion is an antipathy against grazing. This is not true. The uncultivated lands of the West have no other use than for grazing, watershed protection and growing timber. It is consistent that the lands should be grazed as intensely as the growth of forage will permit and maintain. It is also an economic objective to preserve the land surface and grow forage to capacity. It is not good economy for any one to mortgage the future by attempting to extract more in plant growth than nature will maintain.

The call of the western range is for conservation. A definite program and adequate administration will bring it about. But the livestock industry must be given all the benefits that the range will allow. Transferring lands to state or private ownership does not mean the solution for it is on privately owned and state lands where much of the destruction is occurring.

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ENGLISH RIVER COUNTRY BY CANOE

(Continued from page 342)

the dusk, another black form moved across the edge of the forest toward the water, a half mile distant. It was a moose, but we could not outline it distinctly and believed it to be a cow.

When we reached camp in the dark, Northern Lights were suffusing the sky with a brilliant nocturnal radiance that drove us into ecstasies. That night I did not fall asleep readily. I attributed it to the stimulus of a day too full.

We found ourselves leaving the English River a week later to explore some of the country north, but due to the lateness of the season were forced back to the river. On our return we came upon nine families of Indians who were beginning to stir for the coming winter. Their plans had been made, and soon their assembly would break up and start the journey to their respective trapping grounds. Only one among them could speak English, and I took this opportunity to glean as much knowledge of the English River Indian as I could. They were a noteworthy group, almost wholly independent of the outside world—the true woods Indian, not affected by too much contact with the white man but still enjoying with a dignity of spirit the traditions of his tribe.

The mornings were beginning to dawn cold with needles of ice in the pools; and as we were one hundred miles from the railroad we were considering the best possible route from which to leave the river. We decided that we should return to Separation Lake and there leave the waters of the English. We had been in the country now three weeks and felt that it was not advisable to spend more than a week on our way out lest we be frozen in.

About three-thirty on a crisp afternoon we found ourselves again at Separation Lake, a part of the English chain, where, reluctantly, we were compelled at dawn of the following day to leave the English River. We camped on a low promontory from which view, perhaps, we would see for the last time the coming and the going of the waters—out of the wilderness, through the wilderness and into the wilderness, finally to mix with the waters of Hudson Bay. We had feasted on her sturgeon and her wall-eyed pike, had drunk her waters, had gloried in the crimson and gold, had built tiny cooking fires at dawn with her ironwood, and comfort fires at night with her pine and spruce. We had traveled several hundred miles on her quiet and turbulent waters; and so, on the morrow we would leave her to the care of the Red Gods; and may her majestic beauty flow on forever.

On the third day after leaving the English we came to an eighty-four chain portage and then descended upon the sandy shores of Big Sand Lake. This water joins the Winnipeg

River twelve miles to the south, forming the largest of the chain to its source, Lake of the Woods. A heavy gale was rolling the water across the four-mile stretch of the upper lake; but our provisions had been so reduced, that we felt with our light load we might risk the run with the wind. All was well for the first two miles, but our sixteen foot craft showed signs of not wanting to weather the heavier rolls. Every wave became an individual problem, none of which looked workable. But there was no turning back now. We began wondering if, after the many hurdles we had gone over, we should lose the race close to the finish. The canoe was taking water from the rear, pouring over my loins and wetting the packs. A cooking pail was quickly disengaged by Jim, who had the bow; and while he baled, I fought, with a sulphate taste in my mouth, the waves which tended to undo us. Fortunately, this sensational seafaring could not keep up very long, for we were racing the four miles with a speed that would only be equaled in the rapids. The island ahead loomed up quickly, but immediately came the problem of landing on its rocky shores without stoving in the canoe. Jim solved the problem by leaping into the cold water ten feet from shore and rescuing our craft with a skill that marked him with the great.

After a thorough drying in the sun, we resumed our journey behind the islands of the lower lake, running the eight miles with safety and considerable speed. Later in the day there appeared on the distant bank of the river the sun-bathed roofs of our jumping-off place. An Indian with his squaw and a black-eyed youngster passed us in a canoe going north. Their craft was heavily laden, and we concluded that they were bound on the long traverse to the remote trapping grounds. They were the first people we had seen for some time. Presently, we passed under the steel bridge of the Canadian National and drew our canoe up in the face of civilization.

An hour later from the observation platform of a Canadian National train we watched the land of our dreams slip rapidly away. That inevitable melancholia known at parting ways, stole over me and thoughts stirred across the panorama of memory of the long trail back there in the wilderness, where we had bent humbly over small fires cooking our meals; where we had lain in the sweet embrace of the forest during the many nights in a silk-line tent; where we had worked our way over intricate waterways and portage trails to come joyfully to a new and strange body of water, then to slip quietly along into the mystery beyond—such infinite details flashed back to fill the mental sky with stars of jeweled thought.

FOREST INDUSTRIES ADOPT RECOVERY CODE

(Continued from page 349)

to the forest products industries in Chicago last week the President's recent appeal for sustained forest production practices, I stated: 'While I have expressed deliberate opinion that the action of the industry should be constructive and not dilatory, I say with equal firmness and conviction that the public co-operation through the federal and state governments must be substantial, dependable and enduring. Permanent progress toward the protection and productive maintenance of forest resources in private ownership will not be made without the abandonment by the timber states of their present confiscatory systems of taxation of forest properties; until there is

more effective and dependable protection of forest properties from destruction; until there is substantial, permanent and effective protection of American forest products industries from the importation of foreign forest products; and until forest owners, forest industries and forest products are enabled to command capital and credit facilities on terms substantially equivalent to those available to other forms of American agriculture and until the right of the industries to handle these problems through collective action with enforceable performance of constructive industry standards shall have been made permanent.

"I suggested that appropriate assurance be

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promptly given to the President of the United States of the intention of the American forest products industries, relying upon his pledge of effective public cooperation, to deal promptly, affirmatively and constructively with this important public and industry problem:

"This recommendation was given vigorous support by the industry.

"That is our answer to President Roosevelt's request transmitted through Secretary Wallace that provision for forest conservation be made a feature of the Code."

The broad purpose of the Code as set forth in Article I is declared to be "to reduce and relieve unemployment in said industries; to improve the standards of labor therein; to maintain a reasonable balance between the production and the consumption of lumber and timber products; to restore the prices thereof to levels which will avoid the further depletion and destruction of capital assets; and to conserve forest resources and encourage the sustained production thereof." In respect to hours of labor the Code would call for a 48-hour week as a maximum ranging down to forty hours in certain lines of the industry. The minimum schedule ranges from 22½ cents to 45 cents an hour. The lower rate applies mainly to the South. Upon receipt of the Code, General Johnson declared that these schedules are unacceptable in that the hours of labor are too long and the minimum wage rates are too low. It is, therefore, expected that they will be modified.

The industry's code deals primarily with hours of labor, minimum wages, control of production, minimum prices, and organization machinery designed to effectuate the operation of the Code. The Emergency National Committee, (Lumber Code Authority, Inc.), shall be the coordinating agency for the lumber and timber products industries and shall assist the National Recovery Administration in carrying out and enforcing provisions of the Code.

Control of production under the Code is lodged in the Emergency National Committee which is charged with determining and revising from time to time estimates of expected consumption including exports on lumber and timber products. Based upon its findings the committee will establish production quotas for the divisions of the lumber and timber products industries. As between divisions, quotas shall be substantially in proportion to the shipments of each division during a representative period. In regard to minimum prices, the Code would empower the Emergency National Committee when necessary to maintain a balance between production and consumption or to prevent destructive exploitation of standing timber to establish minimum prices for each recognized standard classification of logs, lumber and timber products, with due regard to the competition of species.

The Code as submitted is concurred in by the following organizations of the lumber industry: American Walnut Manufacturers Association, California Redwood Association, Douglas Fir Door Manufacturers Association, Douglas Fir Plywood Manufacturers Association, Hardwood Dimension Manufacturers Association, Hardwood Manufacturers Institute, Indiana Hardwood Lumbermen's Association, The Mahogany Association, Inc., Maple Flooring Manufacturers Association, National Door Manufacturers Association, National Hardwood Lumber Association, National Oak Flooring Manufacturers Association, National Stained Shingle Association, National Woodwork Association, National-American Wholesale Lumber Association, National Retail Lumber Dealers Association, Northeastern Lumber Manufacturers Association, Northern Hemlock and Hardwood Manufacturers Association, Northern Pine Manufacturers Association, Pacific Northwest Loggers Association, Philippine

Mahogany Manufacturers Import Association, Southern Cypress Manufacturers Association, Southern Pine Association, the Veneer Association, Washington-Oregon Shingle Association, West Coast Lumbermen's Association, Western Pine Association.

The personnel of the Emergency National Committee in which rehabilitation of the forest industry and administration of the recovery Code will center is as follows: J. D. Tennant, Chairman, Long Bell Company, Longview, Washington; M. L. Fleishel, Putnam Lumber Company, Shamrock, Florida, representing the cypress industry; C. A. Bruce, Bruce Lumber Industry, Memphis, Tennessee; Fred Bringardner, Bringardner Lumber Company, Lexington, Kentucky; E. B. Ford, Mengel Company, New Orleans, Louisiana, and C. A. Goodman, Sawyer-Goodman Company, Marinette, Wisconsin, representing the hardwood industry; Ralph Hines, Edward Hines Lumber Company, Chicago, representing the northern hemlock industry; S. L. Coy, Northwest Paper Company, Cloquet, Minnesota, representing the northern pine industry; R. S. Brownell, Central Pennsylvania Company, Williamsport, Pennsylvania, representing the northeastern softwood industry; C. R. Johnson, Union Lumber Company, San Francisco, representing the redwood industry; Charles Green, Eastman-Gardiner Company, Laurel, Mississippi; A. J. Peavy, Peavy Wilson Company, Shreveport, Louisiana; and C. C. Sheppard, Louisiana Central Company, Clarks, Louisiana, representatives of the southern pine industry; E. W. Demarest, Pacific National Lumber Company, Tacoma, Washington; and M. E. Reed, Reed Lumber Company, Shelton, Washington, representing the West Coast logging and lumber industries; B. W. Lakin, McCloud River Lumber Company, McCloud, California; and Ralph Macartney, Weyerhaeuser Timber Company, Klamath Falls, Oregon, representing the western pine industry; J. W. Blodgett, Grand Rapids, Michigan; W. M. Ritter, W. M. Ritter Lumber Company, Columbus, Ohio; and F. E. Weyerhaeuser, St. Paul, Minnesota, members at large; A. J. Hager, Hager-Cove Company, Lansing, Michigan, temporary retail representative; Max Myers, Nicola, Stone & Myers Company, Cleveland, Ohio, temporary wholesale representative; and E. J. Curtis, Curtis Companies, Clinton, Iowa, temporary woodwork representative.

On the concluding day of the meeting officers of the National Lumber Manufacturers Association for the ensuing year were elected as follows: C. C. Sheppard, Louisiana Central Lumber Company, Clarks, Louisiana, president, W. M. Ritter, W. M. Ritter Lumber Company, Washington, D. C., vice-president and treasurer; J. P. Weyerhaeuser, Jr., Weyerhaeuser Timber Company, Tacoma, Washington, vice-president; George W. Dulany, Jr., Chicago, vice-president; Wilson Compton, Washington, D. C., secretary and manager.

The new Board of Directors' Executive Committee consists of the President and Vice-Presidents ex-officio, with President Sheppard as Chairman and the following elected members: J. W. Blodgett, C. Arthur Bruce, E. L. Carpenter, W. A. Holt, E. G. Griggs, L. C. Hammond, Mark E. Reed, J. H. Kirby, R. A. Long, C. R. Macpherson, P. V. Eamos, J. D. Tennant, J. W. Watzek, Jr., F. E. Weyerhaeuser, R. B. White, and Frank G. Wisner.

Historic Tree Survey

The Mississippi Forest Service is conducting an Historic Tree Survey that is expected to bring together photographs and descriptions of the famous trees of the State, the main purpose of the survey being to locate and preserve these trees.

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THE PRAIRIE FALCON

(Continued from page 358)

only one in the blind, and, after the camera was in place, with the lens aimed at the nest, the others left the vicinity, with the white falcon sailing around them, as though escorting them away. Then she sped straight for the nesting platform. With rapid strokes of her short wings she came head on, and with feet extended and wings back to alight, she espied the glistening black lens stuck from the canvas. Quickly she wheeled away with a cry of alarm, hurling invectives at the shining object. A piece of burlap was cut from the sack containing the spare film and fastened about the lens. And in a few minutes the hawk darted in and dropped to the ledge. She was nervous, however, and when the camera was started she dived headlong from her perch and joined the male on the cliff a few hundred yards away. She sat upright a long time, with the light shining on her breast, but after a while she assumed a horizontal position and then took off for her nest. The camera was started immediately and in a few moments she alighted, as before. Motionless, with wings dropped, she looked at the blind, and finally, apparently satisfied that all was well in spite of the whirring noise, settled down upon her eggs.

We returned to the blind the following day and found that two of the young were hatched, small downy fellows sprawled awkwardly on the rocky shelf. The mother came in within half an hour to shelter the babies and the remaining eggs. Film records were made, but a great dust cloud in the distance warned us of an approaching gale. Cameras were quickly lowered down the cliff, the photographer followed as rapidly as possible, and then the wind blew. The first onslaught lifted the blind from the shelf and sent it crashing away. It was just as well. We had photographed our white falcon. We had all the motion film we really needed, and we could head for home without regrets.

BROWSING

(Continued from page 348)

are small. Some are no bigger than English walnuts, and grow as thickly as leaves making a tree seem burdened down with big red or yellow berries. Others are large enough to make a satisfactory crunch when jaws are closed upon them, and are well worth picking and storing in the cellar.

After all the forest leaves are shed, save those stubborn ones which cling to the oaks all winter—after nothing in the woods seems still alive, except the witch hazel, which, to be contrary, is just bursting into bloom—the wild grapes, until now invisible, are revealed hanging in irregular withering bunches in the massed vines.

Thanksgiving comes and goes. The snow drives out of the northwest, and drifts high against garage doors. Hug the radiator and pity the poor Eskimo—but don't put away your high-topped shoes. Not if you like jelly.

For warm drizzly days follow the first snows—and on such a day put a basket on your arm and head for a thorn-patch. There, half-buried under the leaves, are bushels of wild crab-apples, mellowed to a rich greasy yellow, ready to be made into the stiff tart jelly that is the only true complement to roast lamb.

December's the month for a big fire under a sheltered ledge, thick steaks roasted on sticks, and a pot of black coffee! Conundrum: What grows in the woods in December, that even a chef would serve with beefsteak?

You'll never guess it. Come down to the spring with me while I get the water for the coffee—over here, where it never freezes—Watercress!

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WHO'S WHO

Among the Authors in This Issue

ALFRED M. BAILEY AND R. J. NIEDRACH (*The Prairie Falcon*) are connected with the Chicago Academy of Sciences, of which Mr. Bailey is Director. Mr. Bailey is one of the foremost writers on bird life in the country. His investigations and photographs have disclosed much of the life of the North American birds.



Alfred M. Bailey

CALVIN RUTSTRUM (*The English River Country By Canoe*) sought the freedom of the cattle country of Montana at the age of sixteen where he spent several years on a western ranch. He is now living in Minneapolis and finds his greatest interest in criminal investigation work. This work frequently takes him into the wilderness areas, the prairie, and the mountains where he is partner with the Northwest Mounted Police and other police organizations.

WILLIAM PETERSON (*Keeping Nature's Balance on the Western Range*) is located at the Agricultural College at Logan, Utah, where he is Director of Extension Service.

DON KNOWLTON (*Browsing*) lives in Cleveland, Ohio. He writes us that he can never go through the woods without chewing at something,—and just out of curiosity one day he began counting up the number of things worth chewing upon in the Ohio woods during a season. After counting as many as fifty, Mr. Knowlton wrote his interesting story for AMERICAN FORESTS.

FREEMAN C. BISHOP (*"Remembered Men"*) though at present enlisted in a Conservation Camp, was formerly a newspaper reporter. His experience in writing and contacts with all types of humanity make him well able to get close to the young civilian foresters and to present them to us in an interesting style.

HENRY B. STEER (*Are Stumpage Values Vanishing?*) is a forest economist in the Branch of Research of the United States Forest Service. He came to Washington about five years ago, prior to which time he was in the Indian Forest Service and was located at different Indian reservations throughout the Northwest.

DONALD N. CARPENTER (*Hatteras Channel Bass*) is a writer and ardent fisherman of Washington, D. C., and associated with the work of the Izaak Walton League of America.

W. KEIBEL (*"Church Woods"*) lives at West Allis, Wisconsin, from where he sends us this interesting account of the people who inhabit the little domain of "Kirchhayn."

WAKELIN MCNEEL (*Forest Page for Boys and Girls*) is active in State club work at Madison, Wisconsin.

